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ABSTRACT

In 1994, Congress passed the Healthy Meals for Healthy Americans Act, requiring that Child Nutrition Programs comply with the Dietary Guidelines for Americans and meet nutrient standards. In 1995, the U.S. Department of Agriculture (USDA) issued new regulations to define how the Dietary Guidelines would be applied to school meals, called the School Meals Initiative (SMI). Since 1996, compliance with the Dietary Guidelines is to be achieved through a choice of meal planning options for schools to reach the nutrient standards for Healthy School Meals. School food authorities can operate with one of four specific menu planning options: NuMenus, Assisted NuMenus, Food Based Menus, or Traditional Menus. This guide was developed to help school food services comply with the new regulations and reach children's nutritional needs. Following introductory chapters that outline the purpose of Healthy School Meals and suggest tips for getting started, the guide's chapters are: (1) "Menu Planning"; (2) "Nutrition Goals"; (3) "Standardized Recipes"; (4) "Menu Production Records"; (5) "Condiments"; (6) "Processed Food Product Nutrient Data"; (7) "The SMI Review"; (8) "Travel Companions"; (9) "Definitions"; and (10) "Resources." Detailed information intended to help answer technical questions is appended to the guide, including USDA-approved menu planning options, a standardized recipe form, a menu production record, a manufacturer nutrition facts label, and the common percentage of moisture and fat change during food preparation. (LPP)

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TRAVEL GUIDE
TO HEALTHY SCHOOL MEALS

ED 425 851

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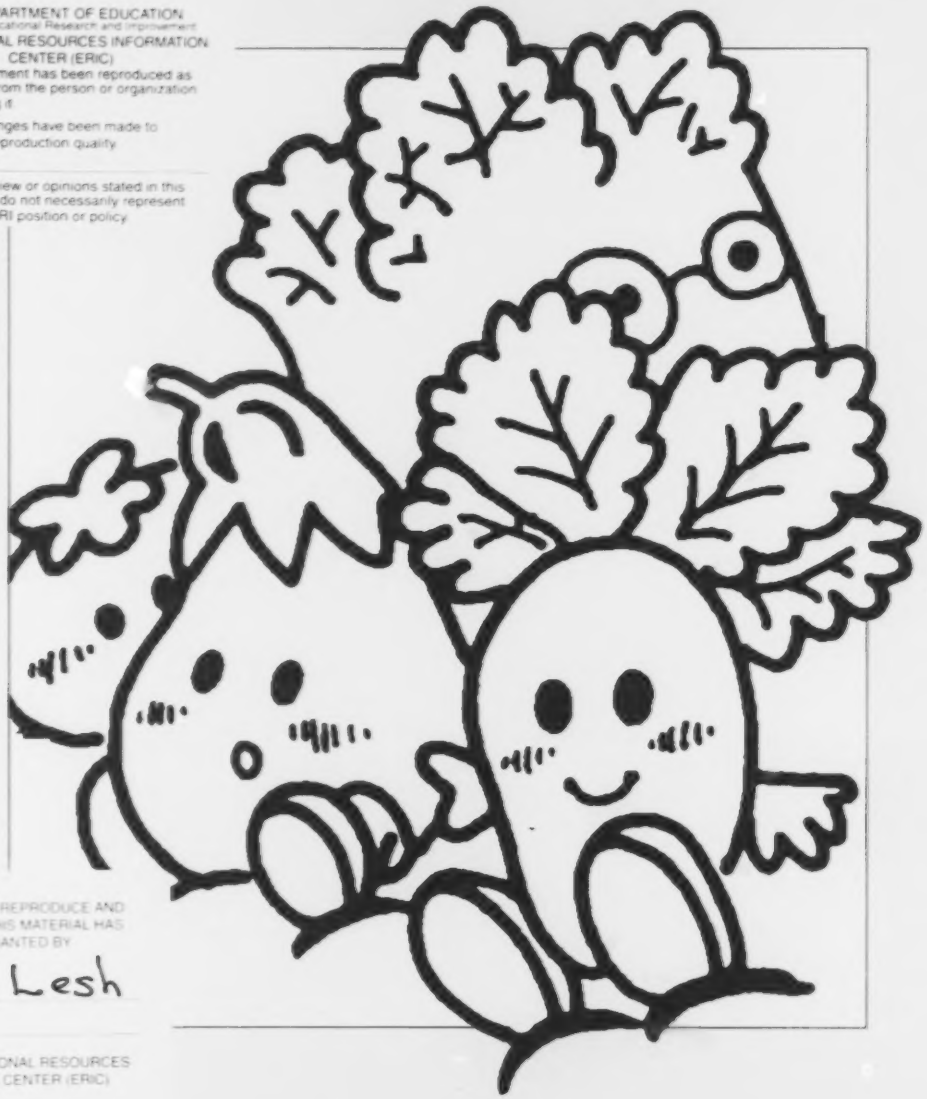

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School menu planning to meet our children's nutritional needs

Oregon Department of Education — Child Nutrition Programs

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Child Nutrition Programs
Oregon Department of Education
255 Capitol Street NE
Salem, Oregon 97310-0203
(503) 378-3579

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This *Travel Guide* may be subject to revision, resulting from progressive, nutritional research. Modified pages will be forwarded to food service programs in every Oregon school to update *Travel Guide* information.

Travel Guide Project Manager:
Terri Lloyd-Jones M.A., R.D.
Nutrition Education and Training Specialist
Child Nutrition Programs
(503) 378-3579 x470
Terri.lloydjones@state.or.us

Major Contributing Consultants:
Heidi W. Dupuis, R.D.
Lynn A. Martin, R.D.
Bea Nash, M.A., R.D.
Jennifer Parenteau, R.D.

TRAVEL GUIDE
To Healthy School Meals

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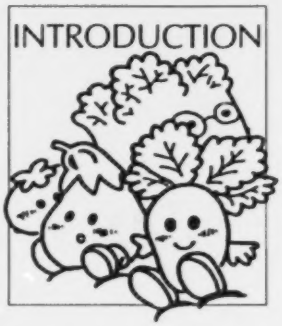


The Purpose
For Healthy School Meals

WHY ARE WE TAKING THIS JOURNEY?

Nutrition is a vital part of the healthy lifestyle to help prevent disease and disability. There is more to good nutrition than having enough food. It requires eating an adequate balance of healthy food.

Because diet has a long-range effect on health, happiness, education and success for children, Healthy School Meals is our opportunity to enhance the future for students and their ability to learn. By serving nutritious meals and providing nutrition education through quality school food service, we form a vital link to the physical and intellectual fitness of children.

Americans generally consume too little fiber and too much fat, saturated fat, cholesterol and sodium. Because we need to improve nutrition habits, our federal, state and local governments have taken steps to help adjust our children's diets.

In 1990, the Dietary Guidelines for Americans were revised to establish appropriate calorie levels from total fat and saturated fat, and to recommend monitoring sodium, cholesterol and fiber intake for everyone more than two years old.

In 1992, the Dietary Guidelines became consumer friendly by presenting the Food Guide Pyramid information in a colorful, easy to understand image.

By 1994, Congress passed legislation called the Healthy Meals for Healthy Americans Act, requiring that Child Nutrition Programs comply with the Dietary Guidelines and meet nutrient standards.

In the summer of 1995, the United States Department of Agriculture (USDA) issued new regulations to define how the Dietary Guidelines would be applied to school meals. It was called the School Meals Initiative (SMI).

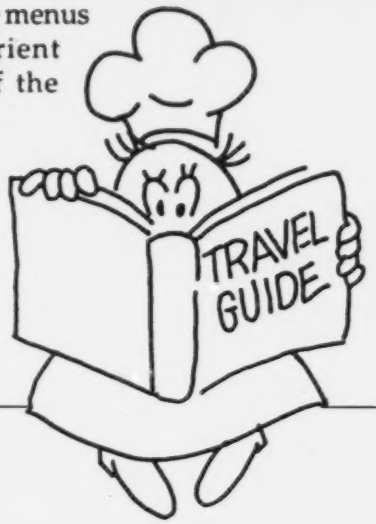
Since July 1, 1996, compliance with the Dietary Guidelines is to be achieved through a choice of meal planning options for schools to reach the nutrient standards for Healthy School Meals. School Food Authorities (SFAs) can operate within one of four specific menu planning options: NuMenus, Assisted NuMenus, Food Based Menus or Traditional Menus.

Schools are reviewed periodically to determine if they are following the menu planning option they selected, and if menus are meeting nutrition standards.

This *Travel Guide* was developed to help school food services reach Healthy School Meals and meet our children's nutritional needs.

WHAT THIS *TRAVEL GUIDE* DOES FOR YOU

- Informs you about menu planning and cycle menus
- Acquaints you with the required nutrient standards and the recommendations of the Dietary Guidelines
- Describes how to standardize recipes
- Explains how to obtain nutrient analysis data from food manufacturers
- Provides instructions to gather the data that will enable the State Agency to make a nutrient analysis of your menus



Everyone will determine how to effectively utilize this *Travel Guide* to improve their food services. Some people should read the entire manual, from cover to cover, to understand requirements, options and operations. More experienced staff can review the Table of Contents and determine which chapters apply to their individual programs or personal interests. The *Travel Guide* will help everyone solve new curiosities and questions as you develop your program for Healthy School Meals.

Don't be confused by the *Appendix*. This detailed resource is included to answer specific, technical questions, rather than guide your journey.

If you need additional information, please contact your State Agency. Program consultants are available for both management and technical assistance.

SMI

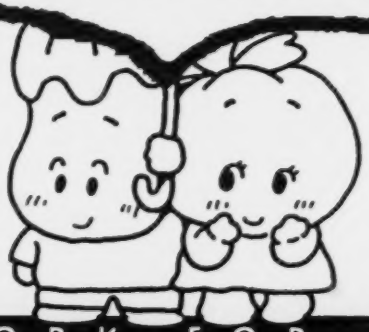
SCHOOL MEALS INITIATIVE

June 1995: Publication of Final Rule

School Meals Initiative (SMI) is part of an integrated, comprehensive plan for promoting the health of the nation's school children by updating the nutrition standards for school meals and by providing state agencies and local food service operators with the Technical Assistance (TA) and tools to meet these standards.

FIVE GUIDING PRINCIPLES

Healthy Children: Provide access to Healthy School Meals
Customer Appeal: National nutrition campaign targeted to children
Flexibility: Reduce paperwork
Investing in People: Technical Assistance to build nutrition skills
Building Partnerships: Public and private sector collaboration



FRAMEWORK FOR ACTION

EAT FOR HEALTH

Meeting Dietary Guidelines

Meeting Nutrient Standards

MAKE FOOD CHOICES

Nutrition education, training and TA to meal providers to improve meal quality

Provide knowledge and skills that enable children to make nutrition-wise choices

TEAM NUTRITION

MAXIMIZE RESOURCES

Improve commodities

Enhance access to locally grown commodities

Better use of regional agricultural resources

Strengthen partnerships between state and local cooperators to stretch school food dollars

MANAGE FOR THE FUTURE

Reduce paperwork

Streamline procedures

Emphasize administrative flexibility to free program managers to concentrate on nutrition

Implementation plan for SMI: Making Food Choices will be achieved through Team Nutrition (from USDA Team Nutrition Strategic Plan for Technical Assistance) to assure that school nutrition and food service personnel have the education, motivation, training and skills necessary to provide Healthy School Meals that appeal to the children served, and meet USDA nutrition requirements. These personnel will also have a clear vision of their role in the school community and as an integral team member of comprehensive school health programs.

YOUR NOTES

Tips to Launch
Your Journey to
Healthy School Meals

WELCOME ABOARD!

To be sure that your school meals meet the Dietary Guidelines and nutrient standards, you need to know how you can adjust your menus and methods of food preparation accordingly. This *Travel Guide* will help you interpret nutrition standards and find the route to Healthy School Meals. Here are some tips to help you begin your journey.

Organize a good team of travel companions. Team Nutrition is a national program to assist you in your journey to Healthy School Meals by establishing working partnerships with schools, families, media and the community. Review Chapter 8 (*Share Your Journey*) for ideas about how to work effectively with staff, students, teachers, parents and vendors.

Collect other travel information and reliable resources that will help you. *Chapter 10* is a roster of training manuals and materials, such as the *Food Buying Guide* and the *Healthy School Meals Tool Kit*, which are available from your State Agency.

Set a goal to standardize at least two recipes a month for the first three months. After the first three months, set a goal to standardize one or two recipes a week.

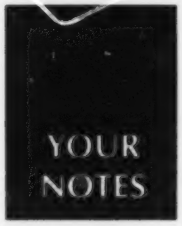
Look in your storerooms for the right combinations of foods and recipes. Some will need to be modified, some are perfect for your trip as they are. You might want to buy some new things for the journey. Discuss this with your travel companions and work together to add the right menu items. Getting it all together will take some time.

The USDA has designated your travel destination to Healthy School Meals, but the route and the itinerary are up to you! Think of the process as a journey with this handbook as your *Travel Guide*. The guide will help interpret the new language you encounter and be your map to the School Meals Initiative. It will provide signposts to guide you, and help you navigate new regulations.

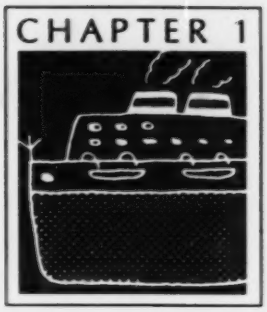
As you progress toward your destination, you will learn more about how to serve school meals which meet the Dietary Guidelines and the nutrient standards set for you by the USDA. You will also collect the information your State Agency needs to provide a nutrient analysis to document your successful journey to Healthy School Meals.

If you feel lost or confused by terminology, definitions are available in *Chapter 9*. The *Appendix* includes more comprehensive information on several topics referred to throughout this *Travel Guide*.

Now grab your gear and prepare for an interesting, pleasant journey!


YOUR
NOTES

Select the Guided Tour
(Traditional or Food Based Menus)
...or a Scenic Route
(NuMenus or Assisted NuMenus)



MENU PLANNING

Navigating This Chapter

This chapter briefly explains the four approved menu planning options and also provides general information on good menu management.

As of July 1, 1996, all School Food Authorities must select one of the four approved options to plan menus in their school meal programs (or by July 1, 1998, for schools with a State-granted waiver). Schools may choose more than one system to accommodate their needs.

THE FOUR APPROVED MENU PLANNING OPTIONS FOR SCHOOLS	
• Traditional Menu Planning	• NuMenus
• Food Based Menus	• Assisted NuMenus

Below is a quick review of each menu planning option. See *Appendix 1A* for an itemized chart of menu planning options.

Menu Planning Options

TRADITIONAL MENU PLANNING

This menu planning option is one schools have been using since the beginning of the National School Lunch Program in 1946. Traditional Menu Planning uses food components and food items as the basis for menu planning. Under this menu planning option, there is no requirement for schools to conduct a nutrient analysis of menus. The State Agency will conduct the analysis at the time of the School Meals Initiative (SMI) review. See *Appendix 1B* and *1E* for a full description of required food components and food items.

FOOD BASED MENUS

This menu planning option is similar to Traditional Menu Planning in that it is based on food components and food items. Food Based Menus increase the portion size for fruits and vegetables, and the number of grains/breads servings. Specific portion sizes are required by age groups. Under this menu planning option, there is no requirement for schools to conduct a nutrient analysis of the menus. The State Agency will conduct the analysis at the time of the SMI review. See *Appendix 1C* and *1E* for a full description of required food components and food items.

NUMENUS (Nutrient Standard Menu Planning: NSMP)

NuMenus is a method to develop menus based on a computer analysis of key nutrients in all food items offered during one week. This option requires the SFA to use a computer and USDA approved menu planning software to analyze menus for compliance with nutrient standards by age/grade groups before serving meals as planned. Your program consultant can advise you about the available software. Nutrient analysis of menus is derived from information provided in USDA's National Nutrient Database for Child Nutrition Programs (which is included in all USDA approved software packages), and product information entered by the SFA. Under this menu planning option, there is no requirement for specific food components or of any types of food with the exception of fluid milk. All foods served count toward the nutrient analysis. See *Appendix 1D* for more descriptions.

ASSISTED NUMENUS (Assisted Nutrient Standard Menu Planning: ANSNP)

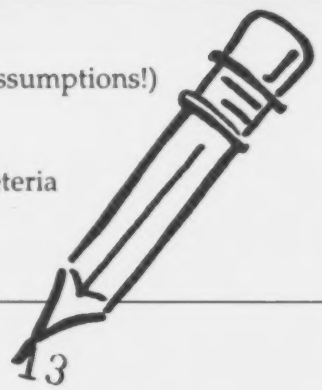
Assisted NuMenus is designed for those schools that do not have the technical computer resources to implement the NuMenus but want to take advantage of the flexibility of non-food based menu planning. Assisted NuMenus allows the menu planner to use the expertise and services of outside sources, such as another school district, a private consultant, or a business to provide menus that have been pre-analyzed to meet nutrient standards. Any menu changes made by the SFA or the school may require menus to be reanalyzed to assure that nutrient standards are met. It is the SFA or school's responsibility to obtain Assisted NuMenus from a credible source. See *Appendix 1D* for a more descriptions.

Menus

A menu is a list of foods served or available at a meal. Successful school lunch and breakfast programs depend on good menus. The menu drives the planning, purchasing, production, service and marketing activities in your food service operation. The menu is also a powerful tool for teaching students about healthy dietary habits.

CONSIDERATIONS FOR WRITING GOOD MENUS

- Customer likes and dislikes
  (Determined by surveys and taste-tests, not assumptions!)
- Money available for food and labor
- Skill level of food service staff
- Equipment and layout of the kitchen and cafeteria
- Meet Federal regulations



GOOD MENUS INCORPORATE THESE BASIC PRINCIPLES EVERY DAY

- Offer foods of different textures–soft, crunchy, smooth, chewy
- Offer foods of different colors–tomatoes, corn, bread, dark leafy greens
- Offer foods of different temperatures–hot entrees, cold salads
- Offer foods of different tastes–spicy marinara sauce, sweet pineapple chunks
- Offer foods of different shapes–potato wedges, chopped cabbage, bean soup
- Offer foods that are good sources of vitamins A and C–oranges, melons, carrots, kiwi, leafy greens, tomatoes
- Do not offer the same form of food more than twice in one week –ground beef foods, hot dogs, casseroles

CYCLE MENUS

Menu planning takes considerable time, but it is time well spent. Cycle menus are the most efficient way to accomplish this important task. A cycle menu is written for a specified period of time, often two to four weeks in a school setting. At the end of the cycle, the menus are repeated. During the cycle no identical menu appears more than once, but some of the same foods are used in different combinations on different days. Example: Pizza may be served three times during the cycle, but each time it appears on the menu with different foods. You may need to make occasional adjustments to a cycle menu—to use up overstocked foods, because an item is unpopular, or you learn that items ordered from a vendor are unavailable.

Cycle menus can be written seasonally. For example, you may want to write a three or four week cycle menu for Fall into Winter, for Winter into Spring and for Spring into Summer.

Start with a blank menu form and fill in the entrees for each day. Be creative with your entrees! Under NuMenus and Assisted NuMenus you have the flexibility to make entrees look different, interesting and healthful. Next, fill in the vegetables, fruits, grains/breads and milk. To avoid monotony, make changes to include holidays and foods for special events. You may want to leave one day blank to present some new recipes or vendor products. Keep in mind that these "open" days (sometimes called "Cook's Choice") must still be planned and analyzed at least two weeks before serving the menu under the NuMenus option.

Once the cycle menu is written and tested and adjustments have been made, it is time to complete menu production records as explained in *Chapter 4*. Write a master menu production record for each day of the cycle containing all of the information that doesn't change. Make copies for the staff who will be preparing the menu. The cook can then simply fill in the information unique to each day such as the date, any substitutions, the amounts of foods actually prepared, meal counts and leftovers.

FOOD PYRAMID CHOICE MENUS (FPCM)

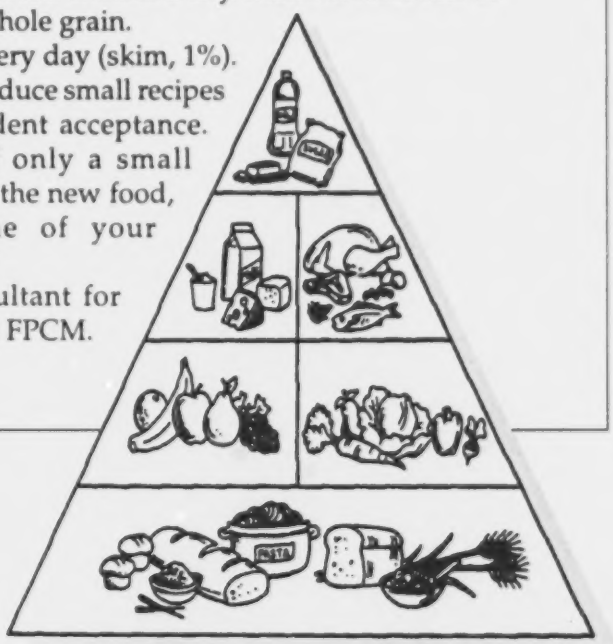
FPCM can be a favorable, alternate route to Healthy School Meals (and beyond) because children like choices. They live in a world where they enjoy choosing their own preferences in everything from clothes to movies! Research has shown that when children are given a wide variety of healthy foods to choose from, over time they will self-select a nutritious diet.

Offering choices improves the nutritional quality of your menus, especially when you offer lots of fruits, vegetables and grain foods. It also accommodates students with special dietary needs, such as food allergies. It gives you flexibility to satisfy students with unique food preferences, such as vegetarians. Offering choices along with Offer Versus Serve (OVS) decreases plate waste significantly because students are more likely to see something they like on the menu, and eat what they choose.

For these reasons, the Food Pyramid Choice Menus system was developed. It uses multiple entree options and a self-serve variety bar. FPCM is not a USDA approved menu planning system, but it is easily adapted to Food Based Menus or NuMenus.

RECOMMENDATIONS FOR FOOD PYRAMID CHOICE MENUS

- Offer at least three entree options every day. Make one of the entree options plant-based (meatless) every day.
- Offer at least six different fruits and vegetables every day. Strive for fruits and vegetables in their most unprocessed state (Examples: raw, lightly steamed, no butter added).
- Offer a low-fat, yogurt-based dip for fruits and vegetables.
- Offer at least three grain/bread choices a day. Make at least one of the grain/bread choices whole grain.
- Offer a variety of milks every day (skim, 1%).
- Use the variety bar to introduce small recipes of new foods to test student acceptance. Remember that even if only a small number of students select the new food, you are meeting some of your customer's expectations!
- Call your program consultant for more details to implement FPCM.



Steps in Planning Menus

1. DETERMINE WHICH MENU PLANNING OPTION YOU'LL BE USING

If you choose Traditional or Food Based Menus, you must plan your menus around food components. This is similar to a "guided tour" because the food component requirements guide your menu planning. Or you may choose the flexibility of NuMenus or Assisted NuMenus menu planning. These options are more like taking the "scenic route" on your journey because you can use your creative imagination to investigate limitless opportunities for introducing new foods as menu items. Because you are not required to offer specific foods, you can try a wide variety of ethnic menu items, grain and vegetable-based entrees, soy meat analogs and more!

2. GATHER MENU RESOURCES

- Your old menu production records
- Recipes from food companies, food service publications, and USDA
- Menus shared by other schools
- Vendors' promotional literature (they sometimes include menu suggestions)
- *Tool Kit for Healthy School Meals* manual (USDA Team Nutrition resource)
- Student advisory group input
- Review Chapter 10, *Resources*, for other training materials and information that would be appropriate to your school food service.

3. DETERMINE A MENU CYCLE TIME LENGTH

The most common menu cycle is two to four weeks in a school setting. Menus must be planned for at least a week at a time because the required nutrient analysis in NuMenus and Assisted NuMenus is based on one week's menus, as planned. And menus under Traditional and Food Based Menus must offer a specified number of fruit, vegetable, and grain servings per week.

4. SELECT ENTREES FOR EACH DAY OF THE WEEK

Use your imagination to select a variety of traditional and nontraditional entrees. Strive to make entrees more grain and vegetable-based. Use ethnic entrees (Example: Greek gyros, Indian sweet potato stew, Asian sweet-n-sour tempeh or chicken). When you offer a blend of traditional and nontraditional entrees, you will attract students who are adventurous and unconventional, plus those who want the security of familiar foods.

5. SELECT OTHER MENU ITEMS TO MEET REQUIREMENTS

Offer a large variety of other foods. This is the place to offer lots of fruits, vegetables and whole grain products. Purchase vegetables and grain products ready-prepared whenever possible. Thoroughly wash all unpeeled fruits and vegetables before serving. Offer at least one whole grain item every day (Examples: brown rice pilaf, whole wheat crackers, cracked wheat salad tabouli, multigrain rolls). Keep this part of your menu as simple as possible to free-up time for production of multiple entrees, nutrition presentations and marketing your Healthy School Meals program!

Publishing Menus

The menu is the number one sales tool for your school food service. Menus are presented in many different forms, ranging from handwritten photocopied handouts, to highly decorated menu boards. If you write your menu on a menu board, enlist the help of a staff person or student who has good lettering skills. Even the nicest fluorescent menu boards can lose their effectiveness with uneven, illegible writing.

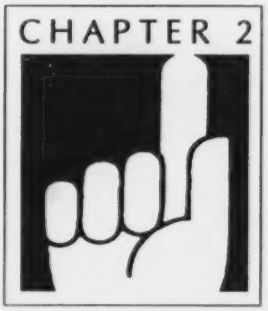
Chalk boards make wonderful, inexpensive menu boards when lettered with colored chalk that has been dipped in water. Again, remember the importance of sharp, even lettering.

Graphic software programs that provide fun, attention-grabbing pictures and highlights are available for printing your menus if you use a computer in your food service operation. If you do not have these skills, present the monthly menu to a computer class student as a project. Some vendors offer menu writing kits that include nutrition-related games and puzzles. Use all the free resources available to you!

When you invest the time and energy to develop a creative, healthy menu, take the next step to market it through all possible avenues. Hand out attractive take-home menus, contribute to a menu column in the local newspaper, and add your menu to a nutrition column in your school newsletter. Create attention-grabbing menu boards and even radio public service announcements.

The positive feedback and success you experience from this extra effort will make your journey to Healthy School Meals a fun adventure!

CHAPTER 2



Follow the Signs
to Healthy School Meals

NUTRITION GOALS

Navigating This Chapter

All meals served under the National School Lunch and School Breakfast Programs must strive to meet eight nutrient standards and the recommendations of the Dietary Guidelines. This chapter clarifies the SMI nutrition goals, which apply to all programs, regardless of which menu planning option is used.

As you embark upon your journey to Healthy School Meals, follow the School Meals Initiative (SMI) signs along the way. Recognize nutrient standards as the signs that will guide you in the right direction.

According to the SMI, school meals must meet eight nutrient standards averaged over a week (three to seven consecutive days).

THE KEY ELEMENTS OF NUTRIENT STANDARDS			
1. Calories	3. Saturated Fat	5. Calcium	7. Vitamin A
2. Total Fat	4. Protein	6. Iron	8. Vitamin C

The standard for total fat is 30 percent or less of total calories. The standard for saturated fat is 10 percent or less of total calories. Values for the other nutrients and calories are based on the Recommended Dietary Allowances (RDAs) for specific age groups.

The regulations also seek to reduce sodium and cholesterol and to increase fiber in school meals. Although specific amounts have not been set for these three nutrients, you are expected to track them to demonstrate that, over time, you have reduced sodium and cholesterol and increased fiber in the meals you offer students.

Recommended Dietary Allowances RDAs

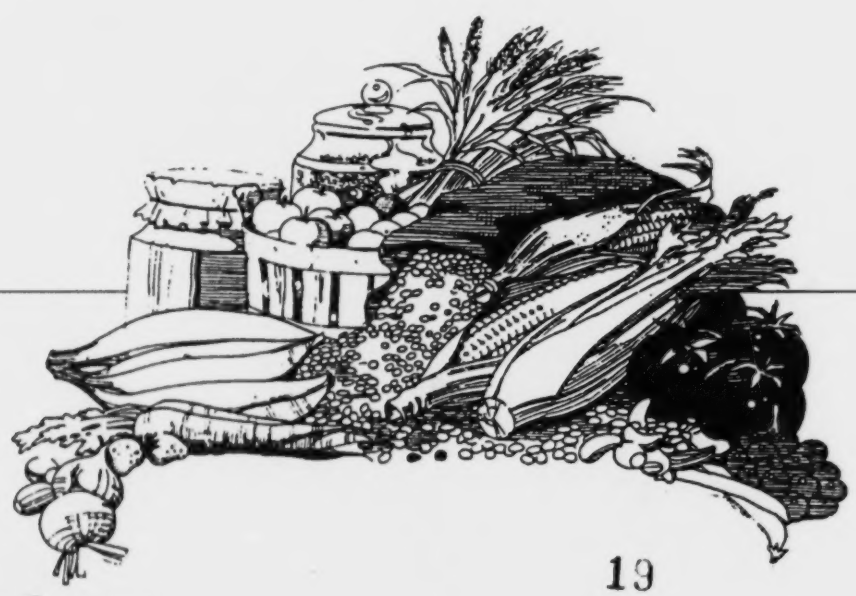
The RDAs are set by the National Academy of Sciences/National Research Council and the Food and Nutrition Board. These organizations are independent scientific bodies, not government agencies. The RDAs were set for the first time in 1943 and are revised periodically, based on reviews of current scientific research. The RDAs are the levels of nutrients that have been determined to be adequate to meet the known nutritional needs of most healthy people. It is recommended that you calculate daily nutrients as the average from a five-day school week total.

Dietary Guidelines for Americans (Dietary Guidelines)

The *Dietary Guidelines for Americans* are published every five years as a joint project of the United States Department of Agriculture and the United States Department of Health and Human Services. While RDAs are established to recommend nutrient adequacy to avoid deficiency diseases, the Dietary Guidelines are written to help people select a diet that promotes optimal health.

1995 DIETARY GUIDELINES FOR AMERICANS

- Eat a variety of food
- Balance the food you eat with physical activity
- Choose a diet with plenty of grain products, vegetables and fruits
- Choose a diet low in fat, saturated fat and cholesterol
- Choose a diet moderate in sugar
- Choose a diet moderate in salt and sodium



SCHOOL MEALS INITIATIVE NUTRITION GOALS

MEET NUTRIENT STANDARDS
(Based on RDAs)

MEET RECOMMENDATIONS OF THE DIETARY GUIDELINES

SMI requires that meals served in the National School Lunch program contain nutrients that meet one-third of the RDA for calories and seven specified nutrients according to age/grade levels. Meals served in the School Breakfast Program must contain nutrients that meet one-quarter of the RDAs for calories and seven specified nutrients according to age/grade levels. All meals served must meet the Dietary Guidelines. As the RDAs and the Dietary Guidelines are updated, the SMI nutrient standards will be modified to reflect the most recent scientific recommendations.

The next section of this chapter provides a brief description of each nutrient standard with a short explanation of the nutrient's dietary significance, and suggestions to help you meet the standards. After you are familiar with this information, use the chart on the following page as a quick reference to required nutrient standards, by grade, for lunch and breakfast (averaged over a school week.)

REQUIRED MINIUMUM STANDARDS BY GRADE FOR LUNCH & BREAKFAST

Minimum calorie and nutrient levels for school lunch and breakfast with Traditional Menus, Food Based Menus, NuMenus and Assisted NuMenus are by grade levels. Required quantities listed are total school week averages.

Note: A=30 percent or less over a school week; B=Ten percent or less over a school week

LUNCH	Minimum Requirements			Optional
Nutrients and Energy Allowances	Preschool	K-6	7-12	K-3
Energy Allowances/Calories	517	664	825	633
Total Fat (as a percent of actual total food energy)	A	A	A	A
Saturated Fat (as a percent of actual total food energy)	B	B	B	B
RDA for Protein (grams)	7	10	16	9
RDA for Calcium (mg)	267	286	400	267
RDA for Iron (mg)	3.3	3.5	4.5	3.3
RDA for Vitamin A (RE)	150	224	300	200
RDA for Vitamin C (mg)	14	15	18	15

BREAKFAST	Minimum Requirements		Optional
Nutrients and Energy Allowances	Preschool	K-12	7-12
Energy Allowances/Calories	338	554	618
Total Fat (as a percent of actual total food energy)	A	A	A
Saturated Fat (as a percent of actual total food energy)	B	B	B
RDA for Protein (grams)	5	10	12
RDA for Calcium (mg)	200	257	300
RDA for Iron (mg)	2.5	3.0	3.4
RDA for Vitamin A (RE)	113	197	225
RDA for Vitamin C (mg)	11	13	14

Standard 1: CALORIES

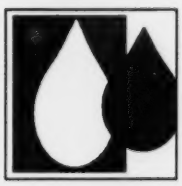
Breakfast: One-quarter of the RDA for calories by age/grade group
Lunch: One-third of the RDA for calories by age/grade group

A calorie is a unit of energy contained in food. All calories come from the energy of the sun, stored in plants as the first link in the food chain. When animals eat plants they store energy. When people eat animal and plant foods, they consume stored energy which they use to fuel the body processes. When they expend energy, they burn calories. Excess energy consumed over immediate energy needs is stored for later use.

Nutrients that supply calories include fats, proteins and carbohydrates. Nutrients that do not supply calories include water, vitamins and minerals.

Children need enough calories to grow physically and intellectually. Too few calories during a child's developmental years leads to stunted growth and impaired mental functioning. Too many calories, however, leads to overweight and possible obesity.

The RDA for calories is based on the average activity levels within groups of particular age, sex, height and weight. (USDA has applied the RDA data to age/grade groups for purposes of the SMI.) Although this guide is not intended to present information on all areas of health and well-being, it is known that regular physical exercise for children and adults is just as important for optimal health as selecting and eating a healthful diet. It is the balance, over time, of calories taken in and energy expended that leads to healthy weight and lower risk of disease.



Standard 2: TOTAL FAT

Thirty percent or less of total calories

Fat is an energy nutrient. It has more than twice as much energy per gram as the other two energy nutrients, protein and carbohydrate. All fat has nine calories per gram.

Nutrient analysis software (computer programs that analyze meals for nutrient composition) will calculate this nutrient standard as a percent of the total calories in your menu.

To adjust menus that exceed the recommended level of total fat, look at all the following sources of fat in your menus and make modifications:

- Oils, Shortenings, Margarine, Butter
- Salad Dressings, Dips, Gravies
- Fried Foods, especially batter-dipped or breaded
- Fatty Meats
- Dairy Products such as whole milk, two percent milk, cheese and ice cream
- High-fat baked goods such as biscuits, muffins, cornbread and doughnuts

Typically, school lunch meals contain 35 to 40 percent of total calories from fat. To meet the SMI total fat standard, you will need to modify recipes to reduce the fat content in many of the foods commonly offered and you will probably need to modify your menus to offer high fat food items less often. If you select either the NuMenus or Assisted NuMenus option, you will have the flexibility of using less high fat meat and cheese foods in your recipes. Most recipes can be modified to reduce the fat ingredient by one-fourth to one-half with acceptable results.

Fat is a concentrated source of calories. Taking out the fat will also reduce calories. To maintain the calorie standard, it is necessary to increase the offerings of such low fat foods as grain products, vegetables and fruits.

Low fat does not mean no fat. It means moderating fat to avoid too much total fat in the diet. Every single food or meal does not have to be low in fat. High fat and low fat foods need to be balanced in menus over a week's time to meet the SMI total fat standard and to maintain menu acceptability. A small amount of dietary fat is needed for good health. Too much fat, especially solid fats, can increase the risk of heart disease and some cancers.

Fat contributes to flavor and tenderness. When you reduce fat in recipes, compensate for that loss by using herbs and spices, alternate cooking techniques and fat replacers in baked goods.

HOW TO REDUCE FAT IN YOUR MENUS

- Use lower fat methods of cooking and baking. Oven bake, rather than frying foods.
- Use prune puree or applesauce to replace some of the solid fat in baked goods.
- Do not add extra butter or oil to foods. Do not brush rolls, breads, burritos, etc. with butter, oil or margarine.
- Drain all ground meat after cooking. (Rinsing ground meat after cooking does not reduce fat much more than simply draining it).
- Utilize low fat or non-fat yogurt to replace at least half of the mayonnaise in dips and dressings.
- Use only fat-reduced mayonnaise.
- Choose products that are formulated to be lower in fat. Make your preferences known to vendors.
- Use chicken, turkey, or lean cuts of beef. Be aware that chicken or turkey hot dogs often have as much fat as beef hot dogs—read and compare labels!
- Offer hot dog items infrequently (no more than twice a month).
- Purchase only ground beef with less than 20 percent fat.
- Offer skim and one percent milk. Even two percent milk contains 35 percent calories from fat, and has the equivalent of a pat of butter per serving!
- Use low fat or part skim milk cheeses.
- Use vegetable protein products (soy) to extend meat in recipes without adding fat.
- Under NuMenus and Assisted NuMenus, use 100 percent soy products to replace meat in some mixed dishes like chili or lasagna.

Generally, grains and breads, fruits and vegetables are low in fat. By increasing the variety and portion sizes of these foods, you will provide calories without adding fat to the menu, thereby lowering the percentage of calories from fat. Not all bread products are low in fat, however. Limit high fat bread/grain products like biscuits, cornbread, cookies, etc. to a few times a month.

Standard 3: SATURATED FAT

Ten percent or less of total calories

As with the total fat standard, nutrient software will analyze the saturated fat in your menus and report it as a percent of total calories.

Saturated fats are usually solid at room temperature. Examples are butter, shortening and grease that is left in a skillet after you have cooked fatty meats. Other examples are hydrogenated and partially hydrogenated vegetable oils such as margarine and shortenings. The tropical oils, palm oil and coconut oil are also highly saturated.

Saturated fat is an energy nutrient that has been shown to increase the risk of coronary heart disease, high blood pressure, diabetes, and some types of cancer. Research shows that the risk begins in childhood and increases with age.

Processing can add saturated fat to an otherwise healthy food. Potatoes, a very low fat food, can become a high fat product when shredded, mixed with hydrogenated vegetable fats, and formed into little pillows sold as potato nuggets. Chicken nuggets are much higher in total fat and saturated fat than broiled chicken pieces.

HOW TO REDUCE SATURATED FAT TO TEN PERCENT OR LESS OF TOTAL CALORIES IN YOUR MENUS

- Reduce total fat in the menu.
- All foods from animal sources (except fish) have primarily saturated fat in their tissues. When you use meats, emphasize those that have a higher ratio of unsaturated fat. For example, chicken, fish, and lean beef have less saturated fat than regular cheese, cold cuts, and regular ground beef.
- Under NuMenus and Assisted NuMenus Menu Planning options, use meats and cheese sparingly in mixed dishes.
- Substitute oil for solid fats in recipes.
- Replace hydrogenated and partially hydrogenated fats with oils whenever possible. Hydrogenated fats act like saturated fats in the body.
- Do not purchase ready-made products made with palm oil or coconut oil. These are the only plant oils known to be highly saturated.

Standard 4: PROTEIN

Breakfast: One-quarter of the RDA for protein by age/grade group
Lunch: One-third of the RDA for protein by age/grade group

Protein is an energy nutrient. It is stored in the body as muscle tissue and is not readily available as an energy source during exercise. Protein is part of all living tissue, animal or plant. Protein is the only energy nutrient with nitrogen as part of its structure. During metabolism, protein that is not used by the body for immediate needs must be broken down and excreted. During the process, nitrogen breaks down into a toxic compound (ammonia) that is excreted through the kidneys, so eating excessive protein stresses the body.

Americans as a group eat plenty of protein. The challenge in meeting this standard is not how to provide enough protein, but to provide protein from sources that are low in fat and that are accepted by students. Plant foods are sources of complete, high quality protein that is generally very low fat.

The RDA for protein can easily be met by planning some meatless meals in your week's menus. You should strive to offer at least one meatless meal option every day. Whole grains, legumes and vegetables are sources of high quality protein. Very small amounts of meats, cheese and eggs can quickly exceed the protein RDA in a mixed meal including vegetables, breads and grains.

Animal sources of protein usually come packaged with fat, most of which is saturated fat. Choose chicken, turkey, lean beef and pork, reduced fat cheeses, yogurt, and skim milk for animal proteins. Offer beans, lentils, peas and whole grains for students to make nutritionally complete meals with adequate protein from plant sources.

Standard 5: CALCIUM

Breakfast: One-quarter of the RDA for calcium by age/grade group
Lunch: One-third of the RDA for calcium by age/grade group

Calcium is a major mineral in the human body. It is stored in the bones and released when the body needs it for normal functioning. In addition to giving structure to bones, calcium is necessary for normal muscle contractions, blood clotting and blood pressure. Calcium is necessary for many chemical reactions in the body involving hormones and the transmission of neurochemical signals across cell membranes. Calcium is essential in the development of bone mass during the growth years (childhood and adolescence) as a preventive measure against bone loss that occurs with aging. This bone loss, called osteoporosis, and its accompanying complications, account for a large part of our national health care costs for the elderly.

Research shows that a high-salt, high-protein diet causes loss of calcium from the body. As calcium is lost, bones release their calcium stores to keep the body functioning properly, and bone loss occurs. Because of the nature of the average American diet, many Americans are not achieving calcium balance in their bodies. More calcium is being lost than is being taken in. This is especially harmful in

the bone-forming years of adolescence. Many students avoid milk and dairy products because of lactose intolerance, allergies or taste preferences so be sure to include other sources of calcium regularly in your menus.

HOW TO MEET NUTRIENT STANDARDS FOR CALCIUM IN YOUR MENUS

- Offer skim milk, one percent milk, low fat chocolate milk, low fat yogurt and low fat cheeses regularly.
- Offer dark green leafy vegetables like kale and broccoli. They are rich sources of calcium as are sesame seeds, almonds, beans and blackstrap molasses,
- Calcium-fortified orange juice and calcium-fortified bread products (tortillas, sandwich bread) are also good sources.
- Try to include as many of these foods as possible in recipes that students will accept. For instance, molasses can be used as the sweetener in some baked goods and in baked beans. Sesame seeds and almonds can be used in salads and vegetable dishes.

Standard 6: IRON

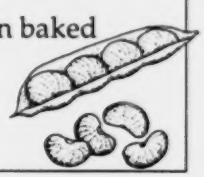
Breakfast: One-quarter of the RDA for iron by age/grade group
Lunch: One-third of the RDA for iron by age/grade group

Iron is a trace mineral that has multiple functions in the human body. Its primary function is to carry oxygen in the red blood cells. When iron is deficient in the body, not enough oxygen is carried to the muscles and brain so we feel tired and cannot think clearly. An ongoing iron deficiency in young children leads to arrested brain development that may be irreversible.

Iron deficiency can be a problem in children who consume too many refined foods and too much milk at the expense of other iron-rich foods. Meats, whole grains, beans, lentils, fortified cereals, dried fruits and blackstrap molasses are good sources of iron. Dairy products are very poor sources of iron and the calcium they contain inhibits the absorption of iron from other foods. Eating a vitamin C-rich food with an iron-rich food enhances the amount of iron absorbed by the body. For children consuming a balanced diet from a large variety of whole (unrefined) foods, iron deficiency is unlikely.

HOW TO MEET NUTRIENT STANDARDS FOR IRON IN YOUR MENUS

- Offer a variety of iron-rich foods such as lean meats, cooked dried beans and lentils, leafy green vegetables, whole grains and fortified cereals.
- Include vitamin C-rich foods like citrus fruits, melons, strawberries and tomatoes in your menu.
- Offer dried fruits on a variety bar and use them frequently in baked goods.
- Offer fortified cereals made from whole grains frequently.
- Use molasses in baking whenever appropriate.



Standard 7: VITAMIN A

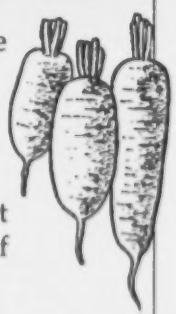
Breakfast: One-quarter of the RDA for vitamin A by age/grade group
Lunch: One-third of the RDA for vitamin A by age/grade group

Vitamin A is a fat soluble vitamin and it is stored in the body tissues. Much of it is stored in the tissues of the eye, where it assists the eye in adapting to night vision. The number one cause of blindness in the world is vitamin A deficiency in the diet. Vitamin A also increases resistance to infectious diseases in children.

Vitamin A has two forms, one from animals, and the other from plants. Most of the vitamin A in the average American diet comes from plant sources.

TO MEET NUTRIENT STANDARD FOR VITAMIN A IN YOUR MENUS

- Offer a variety of fresh fruits and vegetables. Good sources are carrots, spinach, red bell pepper, sweet potatoes, broccoli, apricots, cantaloupe, tomatoes and prunes. To encourage consumption, offer a low fat yogurt dip.
- Remember when planning menus, the deeper the orange or yellow color of the fruit or vegetable, the more pro-vitamin A it contains. A colorful variety bar will generally ensure plenty of vitamin A!



Standard 8: VITAMIN C

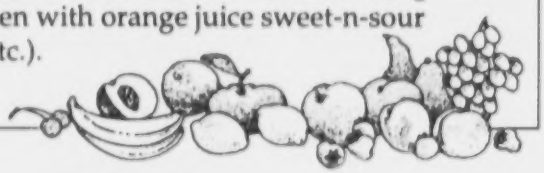
Breakfast: One-quarter of the RDA for vitamin C by age/grade group
Lunch: One-third of the RDA for vitamin C by age/grade group

Vitamin C is a water-soluble vitamin. Large amounts are not stored in the body so we need to consume vitamin C-rich foods regularly. Vitamin C is necessary for healthy skin and connective tissues, and some think it has a protective effect against the common cold, although this has not been scientifically proven. Its action as an antioxidant may reduce the risk of cancer. It is known that consuming vitamin C-rich foods at the same time as iron-rich foods increases the absorption of the iron significantly.

Vitamin C is abundant in the food supply and most people consume adequate amounts.

TO MEET NUTRIENT STANDARD FOR VITAMIN C IN YOUR MENUS

- Offer a variety of fresh fruit and vegetables. Broccoli, cauliflower, bell peppers, citrus fruits, melons, strawberries, tomatoes, cabbage, potatoes and kiwi fruits are good sources. To encourage consumption, offer a low fat yogurt-based dip with fruits and vegetables.
- Offer menus that put vitamin C-rich foods and iron-rich foods together (beans with tomato sauce, chicken with orange juice sweet-n-sour sauce, raisins in melon salads, etc.).



Additional Nutrient Standards

In addition to meeting nutrient standards, the SMI requirement to meet the Dietary Guidelines seeks to reduce sodium and cholesterol and increase fiber in school meals. Specific desirable amounts for these three nutrients have not yet been established, but food services should track their progress in meeting these recommendations of the Dietary Guidelines as they will be included in the nutrient analysis.

SODIUM

Sodium is a mineral that occurs naturally in all foods. As a component in table salt (sodium chloride), it can enhance flavors or overpower them. Processed foods are the major source of sodium in the typical American diet.

Excessive sodium is associated with high blood pressure and loss of calcium from the bones which can lead to osteoporosis. The average American diet provides two to three times more sodium every day than the 2400 mg suggested by the Dietary Guidelines (approximately one teaspoon of table salt).

Everyone's preference for salt develops with age. It takes about six months for the taste buds to adjust to lower sodium foods. A gradual salt reduction in recipes is usually most successful. Studies have shown that cooking without salt and using a salt shaker at the table results in reduced salt consumption.

Sources of sodium include:

- Flavored salts (garlic salt, celery salt, seasoning salt, etc.)
- Monosodium Glutamate (MSG)
- Worcestershire sauce, soy sauce, teriyaki sauce
- Most condiments (mustard, ketchup, barbecue sauce, salad dressings)
- Pickled foods
- Cured meats (ham, sandwich meats, bacon, hot dogs)
- Baking soda, baking powder
- Processed foods
- Soft drinks

HOW TO REDUCE SODIUM IN YOUR MENU

- Reduce the amount of salt you use in recipes. (Reducing salt in yeast breads makes them rise faster so you will need to adjust your recipes accordingly.)
- Reduce the number of pickled foods on your menu.
- Reduce the amount of cured meats you serve.
- Purchase saltines and other crackers with unsalted tops.
- Reduce the amount of processed soups and soup mixes you use in recipes.
- Compare labels for similar products before purchasing. Purchase the one with the lower amount of sodium.
- Use more herbs without salt to season foods.
- Reduce sodium gradually in your recipes for best acceptance.

CHOLESTEROL

Cholesterol is a fat-like substance. It is found only in foods from animal sources (meats and dairy products). Although cholesterol is necessary to maintain human health, our bodies produce all we need. There is no need to consume cholesterol in our diet.

High blood cholesterol that develops as a result of consuming too much saturated fat and too much cholesterol is a major predictor of heart disease. This fatty, waxy substance builds up inside artery walls, leading to fatty deposits in the arteries which can cause strokes and heart attacks.

The Dietary Guidelines suggest no more than 300 mg of cholesterol per day for people of all ages. This is approximately the amount in one egg yolk. This doesn't mean that you should never offer eggs on your menu, but seek to average 300 mg or less per day, when averaged over a week.

HOW TO REDUCE CHOLESTEROL IN YOUR MENUS

- Follow suggestions under the total fat and saturated fat nutrient standards guidelines on pages 18-19. Because cholesterol, fat and saturated fat are usually packaged together, this will keep cholesterol at a moderate level.
- Reduce the amount of animal foods in your recipes, wherever possible. Since there is no cholesterol in any plant food, emphasize more grains, legumes, vegetables and fruits in your menus.

DIETARY FIBER

Fiber is an indigestible part of plant foods. It is not the same as roughage, an old-fashioned term used to describe the fibrous parts of food. Although dietary fiber is considered indigestible, it includes both soluble and insoluble fiber, and is found only in plant foods. There is no dietary fiber in foods from animal sources.

Insoluble fiber is the part of plants that will not dissolve in water. It travels through the digestive tract as bulk which speeds digestion and elimination. Insoluble fiber in the diet is known to reduce symptoms of chronic constipation, diverticular disease and hemorrhoids, and may reduce the risk of colon cancer. Wheat bran and the fibrous parts of broccoli stems are examples of insoluble fiber.

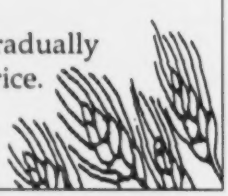
Dietary fiber also includes soluble fiber, also found only in plants. This type of fiber is found mainly in starchy vegetables, legumes and grains, and as pectins in fruits. Soluble fibers have a cholesterol-lowering effect and they stabilize blood sugar.

Many plants contain both soluble and insoluble fiber in their edible parts. Including lots of unrefined plant foods will ensure adequate fiber in the meals you offer students.

Most Americans do not eat the recommended amount of fiber in their daily diets (25-30 grams per day for adults) primarily because our diets are made up of mostly refined, processed foods. The recommended total amount of fiber for children in grams per day is calculated by adding "5" to the age of the child. The Dietary Guidelines suggest that fiber should come from foods (not supplements) because we know there are multiple health benefits from a high fiber diet, but we don't know yet if these benefits come strictly from the fiber alone.

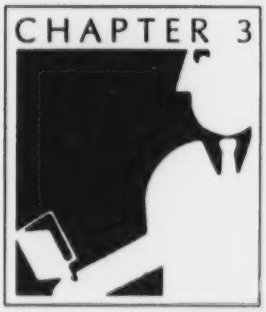
HOW TO INCREASE FIBER IN YOUR MENUS

- If you select the Food Based Menus option, you must increase the number of grain, fruit and vegetable offerings. Make sure to offer many whole grain choices (brown rice, 25-30 percent whole wheat breads, whole grain cereals) and you will be well on your way to providing plenty of fiber in your menus.
- NuMenus and Assisted NuMenus offer limitless possibilities for increasing fiber in your menus by building menus around whole, unrefined foods.
- Soy products and other beans and legumes are excellent sources of fiber in addition to the protein and iron they provide—all in a package with minimal fat!
- Serve fruits with skins left on whenever possible.
- Serve potatoes with skin—baked and oven fried.
- Combine equal amounts of brown and white rice, then gradually decrease white rice until your students accept all brown rice.
- Serve more whole fruits than fruit juice.
- Serve beans and legumes frequently.



YOUR NOTES

CHAPTER 3



Clear Customs
to Reach
Healthy School Meals

STANDARDIZED RECIPES

Navigating This Chapter

Standardized recipes are a key ingredient for good kitchen management and an absolute necessity for nutrient analysis of menus. Regardless of which menu planning option you use, all your recipes must be standardized. For those schools using NuMenus, standardized recipes are entered into a computer using USDA approved software. (NuMenus users can scan this chapter for an overview of standardizing recipes.) For schools using Traditional or Food Based menu planning, this chapter explains the process of standardizing recipes and recording them on the user-friendly forms provided. Finally, for those using Assisted NuMenus, your recipes will already be in a standardized format as part of the Assisted NuMenus package. At chapter's end you will find instructions for creating a recipe book for your kitchen, which is highly recommended for all programs, regardless of which menu planning option is used.

A standardized recipe is one that was tested to provide an established yield and quantity through the use of ingredients that remain uniform in both measurement and preparation methods. You get the same results every time you use a standardized recipe because you use the same quantity and quality of ingredients, the same preparation methods and the same equipment.

WHAT STANDARDIZED RECIPES DO FOR YOU

- Eliminate guesswork
- Guarantee repeat quantity and quality of product
- Simplify work for employees
- Help in determining what and how much to order
- Help control costs
- Provide for accurate nutrient analyses of menus

Recipes that are already standardized and ready for school food service are included in USDA's 1988 publication, *Quantity Recipes for School Food Service*, and the more recently published *Tool Kit for Healthy School Meals: Recipes and Training Materials*. (The *Tool Kit* also contains a short, very understandable recipe training section which complements the information in this chapter.)

You can use your school's original recipes, but they must be standardized so that there is a consistent yield and quality each time they are prepared.

INFORMATION STANDARDIZED RECIPES MUST INCLUDE

- Recipe name (1)
- Servings (2)
- Ingredients (3)
- Measured weight or volume of ingredients (4)
- Preparation directions (5)
- Yield (6)
- Portion size (7)
- Meal Component contributions (if applicable) (8)
- Suggestions for how to serve the product (if applicable) (9)
- Additional information (10)

Review the recipe below for Chicken Tomato Bake (D-41 from the *Tool Kit*). It has all the required components of a standardized recipe.

Chicken Tomato Bake (1)

Meat • Vegetable • Grains/Breads — Main Dishes D-41

Ingredients	50 Servings (4)		100 Servings		For Servings (2)	Directions (5)
	Weight	Measure	Weight	Measure		
Elbow macaroni, uncooked	3 lb	2 qt 3⅓ cups	6 lb	5 qts 2⅓ cups		1. Cook elbow macaroni in a stock pot or steam-jacketed kettle, until firm-tender, about 8 minutes.
Chicken, cooked, diced	3 lb 2 oz	3 qt	6 lb 4 oz	1 gal 2 qt		2. Combine the pasta, chicken, tomato paste, tomato sauce, cheddar cheese, marjoram, and salt in a large bowl. Mix well.
Tomato paste	12 oz	1½ cup	1 lb 8 oz	2⅔ cups		
Tomato sauce (3)	4 lb	1 qt 3⅓ cups	8 lb	3 qt 2⅔ cups		
Water		2 cups		1 qt		
Lowfat cheddar cheese, shredded	6 oz	2 cups	12 oz	1 qt		3. Place 13 lb 6 oz of this mixture into each 12" x 20" x 2½" steam table pan.
Dried marjoram		2 tsp		1 Tbsp 1 tsp		
Salt		2 tsp		1 Tbsp 1 tsp		
Dry bread crumbs	2 oz	½ cup	4 oz	1 cup		4. Top each pan with ½ cup of breadcrumbs. Cover with foil or lid.
						5. **To Bake:** Conventional Oven 350°F, 30 minutes Convection Oven 325°F, 30 minutes
						6. Score each pan 5x10 with a spatula.

SERVING: (7) 1 cup provides 1 ounce of meat, ½ cup of vegetable, and 1 serving of grains/br (8)

YIELD: (6) 50 servings: 13 lb 3 oz; 100 servings: 26 lb 6 oz

(9) **Special Tip:** For a zestier flavor, substitute spaghetti sauce for the tomato sauce.

Nutrients Per Serving

Calories	176	Saturated Fat (10)	.8 g	Iron	1.9 mg
Protein	13 g	Cholesterol	24 mg	Calcium	34 mg
Carbohydrate	25 g	Vitamin A	59 RE/547 IU	Sodium	368 mg
Total Fat	2.8 g	Vitamin C	8 mg	Dietary Fiber	2 g

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Now review the following two recipes and answer questions about missing information at the bottom of the each recipe. Circle the letter by the correct answer.

Meat • Vegetable • Grains/Breads — Main Dishes D-42

Ingredients	50 Servings		100 Servings		For ___ Servings	Directions
	Weight	Measure	Weight	Measure		
Water		3 gal		6 gal		1. Boil water and salt in a steam-jacketed kettle or stock pot. Add spaghetti. Cook until firm-tender, 8 minutes. Drain and hold in cold water. Set aside.
Salt		2 tsp		1 Tbsp 1 tsp		
Spaghetti, broken in thirds	3 lb 1 oz		6 lb 2 oz			
Vegetable oil		¼ cup		½ cup		2. In a steam-jacketed kettle or large saucepan, heat the vegetable oil. Add the vegetable mix or frozen vegetables, mushrooms, and pimientos (optional). Saute vegetables 5 minutes or until tender. Set aside.
Vegetable Mix:						
*Onions, diced	1 lb	3 cups	2 lb	1 qt 2 cups		
*Fresh carrots, diced	1 lb	3 cups	2 lb	1 qt 2 cups		
*Fresh celery, diced	8 oz	2 cups	1 lb	1 qt		
*Fresh green peppers, diced	4 oz	1 cup	8 oz	2 cups		
OR						
Frozen mixed vegetables	2 lb 8 oz		5 lb			
*Fresh mushrooms, sliced	1 lb 4 oz	1¾ cups	2 lb 8 oz	3½ cups		
OR						
Canned sliced mushrooms, drained	10 oz	1⅔ cups	1 lb 4 oz	3⅓ cups		
Canned pimientos, diced, drained (optional)	8 oz	1 cup	1 lb	2 cups		
Margarine or butter	8 oz	1 cup	1 lb	2 cups		3. Melt the margarine or butter in a steam-jacketed kettle or stock pot. Add flour and cook for 3 minutes.
All-purpose flour	8 oz	1½ cups	1 lb	3 cups		4. Slowly add the milk to the flour mixture. Simmer, stirring frequently, until mixture is thickened at 180°F. Add chicken stock, pepper, onion powder, and garlic, and simmer for 5 minutes.
Lowfat milk, hot		2 qt 2 cups		1 gal 1 qt		
Chicken stock		1 qt 2 cups		3 qt		
White pepper		1 tsp		2 tsp		
Onion powder		2 tsp		1 Tbsp 1 tsp		
Granulated garlic		2 tsp		1 Tbsp 1 tsp		

SERVING: ⅞ cup provides 2 ounces of meat, ⅞ cup of vegetable, and 1 serving of grains/breads

YIELD: 50 servings: 24 lb 13 oz
100 servings: 49 lb 10 oz

Ingredients	50 Servings		100 Servings		For ___ Servings	Directions
	Weight	Measure	Weight	Measure		
Chicken, cooked, diced	6 lb 4 oz	1 gal 2 qt	12 lb 8 oz	3 gal		5. In each 12" x 20" x 2½" steam table pan, combine 3 lb 12 oz (3 qt) of cooked spaghetti, 3 lb 2 oz (3 qt) of cooked diced chicken, 1 qt of cooked vegetables, and 2 qt 1 cup of sauce.
Parmesan cheese, shredded	4 oz	1 cup	8 oz	2 cups		6. Sprinkle ½ cup of Parmesan cheese on top of each pan.
						7. **To Bake:** Conventional Oven 350°F, 30 minutes Convection Oven 350°F, 40 minutes Bake until golden brown.
						8. Cut each pan 5x5.

Special Tip: Roasted turkey can be easily substituted for chicken.

Nutrients Per Serving

Calories	301	Saturated Fat	2.8 g	Iron	2.1 mg
Protein	22 g	Cholesterol	51 mg	Calcium	112 mg
Carbohydrate	28 g	Vitamin A	319 RE/2613 IU	Sodium	400 mg
Total Fat	10.4 g	Vitamin C	4 mg	Dietary Fiber	2 g

Marketing Guide for Selected Items

Food as Purchased	For 50-Serving Recipe	For 100-Serving Recipe	For ___-Serving Recipe
Green peppers	5 oz	10 oz	
Onions	1 lb 3 oz	2 lb 5 oz	
Carrots	1 lb 7 oz	2 lb 14 oz	
Celery	10 oz	1 lb 4 oz	
Mushrooms	1 lb 4½ oz	2 lb 9 oz	

1. *What essential information is missing in this Chicken Tetrazzini recipe?*
   a. name of recipe
   b. pan size
   c. weights and measures of ingredients

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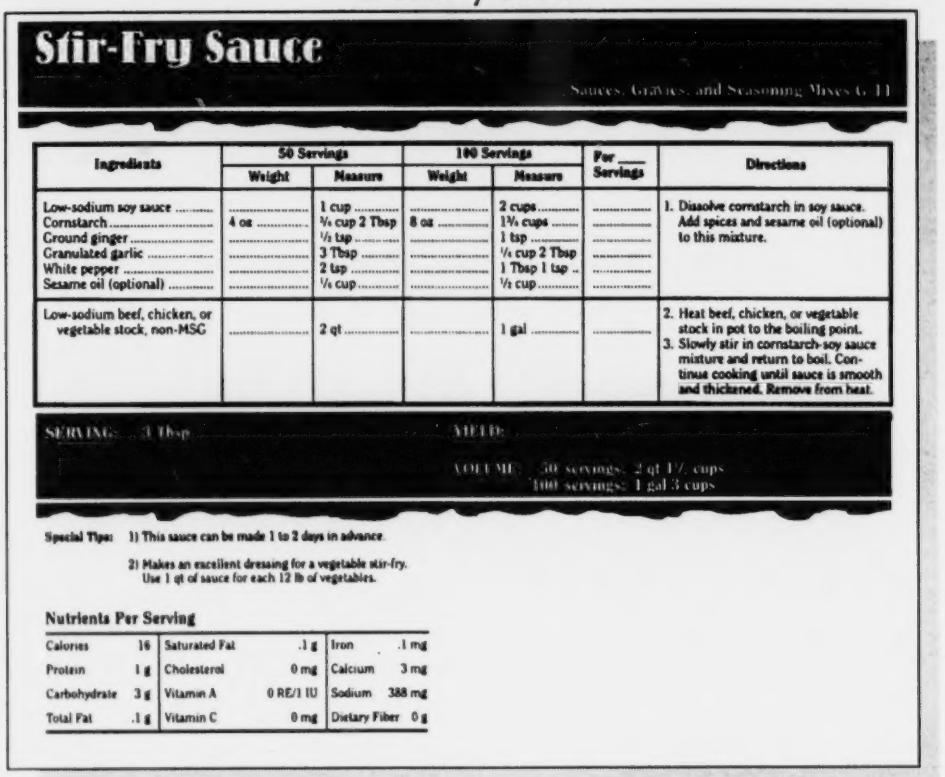
2. Stir-Fry Sauce



Stir-Fry Sauce

Sauces, Gravies, and Seasoning Mixes G-11

Ingredients	50 Servings		100 Servings		For ___ Servings	Directions
	Weight	Measure	Weight	Measure		
Low-sodium soy sauce		1 cup		2 cups		1. Dissolve cornstarch in soy sauce. Add spices and sesame oil (optional) to this mixture.
Cornstarch	4 oz	¾ cup 2 Tbsp	8 oz	1¾ cups		
Ground ginger		½ tsp		1 tsp		
Granulated garlic		3 Tbsp		¼ cup 2 Tbsp		
White pepper		2 tsp		1 Tbsp 1 tsp		
Sesame oil (optional)		¼ cup		½ cup		
Low-sodium beef, chicken, or vegetable stock, non-MSG		2 qt		1 gal		2. Heat beef, chicken, or vegetable stock in pot to the boiling point. 3. Slowly stir in cornstarch-soy sauce mixture and return to boil. Continue cooking until sauce is smooth and thickened. Remove from heat.

SERVING: 3 Tbsp YIELD:

VOLUME: 50 servings: 2 qt 1½ cups
100 servings: 1 gal 3 cups

Special Tips: 1) This sauce can be made 1 to 2 days in advance.

2) Makes an excellent dressing for a vegetable stir-fry. Use 1 qt of sauce for each 12 lb of vegetables.

Nutrients Per Serving

Calories	16	Saturated Fat	.1 g	Iron	.1 mg
Protein	1 g	Cholesterol	0 mg	Calcium	3 mg
Carbohydrate	3 g	Vitamin A	0 RE/1 IU	Sodium	388 mg
Total Fat	.1 g	Vitamin C	0 mg	Dietary Fiber	0 g

2. *What information is missing from the Stir-Fry Sauce recipe?*

a. preparation directions
b. yield
c. portion size
d. how to serve product

ANSWERS

1: a (name of recipe) 2: b (yield)

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How can I standardize the recipes I am using?

Review the Standardized Recipe form at the end of this chapter. (A master copy for duplication is in *Appendix 3A.*) Begin a rough draft of what you know at this time. Enter the following information on the Standardized Recipe Form:

1. Recipe Name
2. Number of Servings
3. Ingredient List
- Before the ingredient name, indicate the purchased state (Examples: fresh, frozen, canned, dried)
- After the ingredient name, write the form of the ingredient (Examples: peeled, sliced, chopped)
- List ingredients in the order they are used

4. Measured Weight or Volume of Each Ingredient
- Use weight measurements for dry and solid ingredients whenever possible (except for teaspoon and tablespoon measurements)
- Use volume measurement for liquid ingredients
- When measuring ingredients, save time by using the largest practical unit (Example: measure a half cup, rather than eight tablespoons.) See *Appendix 3C* for common conversions of weight and volume.

5. Preparation Directions
- To facilitate preparation, directions are numbered in steps. Each step is directly across from the ingredients to which it applies. Closely related steps are grouped together with horizontal lines separating the groups.
- Include methods: mixing, beating, dissolving, etc.
- Include cooking procedures, panning procedures and pan sizes
- Include times and temperatures for all cooking or baking

6. Yield
7. Portion Size
8. Meal Component Contribution

If you use the Traditional or Food Based Menus planning option, your recipes should also list the meal component contribution. Example: 1 ounce meat/meat alternate (M/MA), 1/4 cup vegetable/fruit (V/F), 1 grains/breads (G/B).

It will help to prepare and record your recipe at least twice before you finalize the standard. Have more than one person prepare the recipe to determine if it consistently has the same yield and results. Taste-test the final product with students. If they like it they will be pleased each time it is prepared. Having each menu item identified on a Standardized Recipe form will make it easy for all employees to know exactly what is expected for each menu item.

ADDITIONAL INFORMATION THAT CAN HELP EACH RECIPE

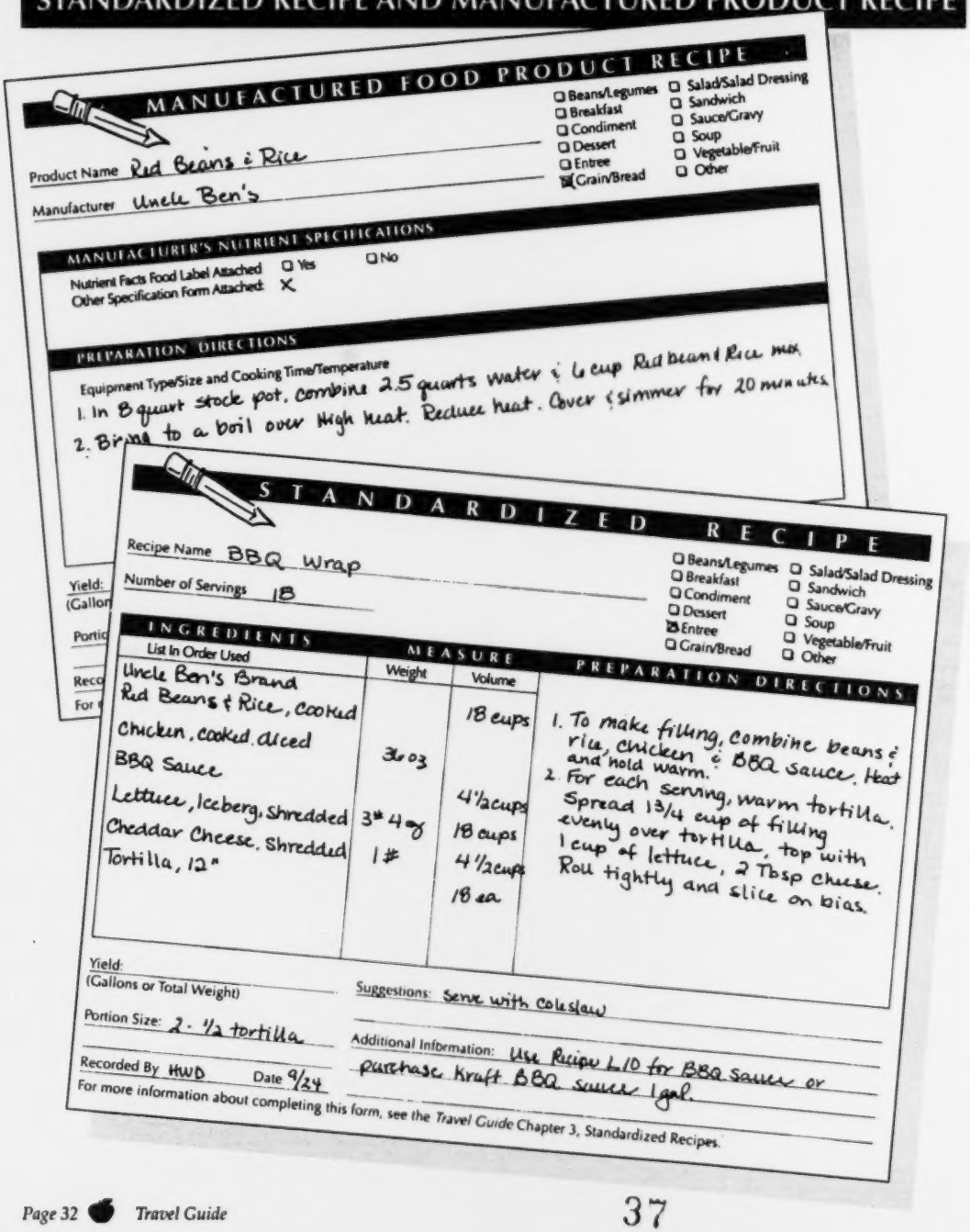
- Suggestions for how to serve (Example: During Christmas holiday, serve with cranberries!)
- Total time to prepare
- Recipe recorder's name and the date the recipe was standardized
- Classification
- Nutrients per serving
- Variations
- All additional useful information

Do I need to standardize the recipe for every item on my menu?

To conduct a nutritional analysis of your menus, all items served must be in a standardized recipe format EXCEPT purchased foods that have product nutrient data, such as a *heat and serve* burrito, *bottled* salad dressing, or a cake mix made following package directions.

When a purchased menu item is altered in any way, such as adding vegetables to a frozen cheese pizza, then a Standardized Recipe form of that menu item is necessary. Some menu items may require both a Standardized Recipe form and a Manufactured Food Product Recipe form.

EXAMPLE: BBQ WRAP REQUIRES INFORMATION FORMS FOR STANDARDIZED RECIPE AND MANUFACTURED PRODUCT RECIPE



MANUFACTURED FOOD PRODUCT RECIPE

Product Name: Red Beans & Rice

Manufacturer: Uncle Ben's

☐ Beans/Legumes ☐ Breakfast ☐ Condiment ☐ Dessert ☐ Entree ☒ Grain/Bread ☐ Salad/Salad Dressing ☐ Sandwich ☐ Sauce/Gravy ☐ Soup ☐ Vegetable/Fruit ☐ Other

MANUFACTURER'S NUTRIENT SPECIFICATIONS

Nutrient Facts Food Label Attached: ☐ Yes ☐ No

Other Specification Form Attached: X

PREPARATION DIRECTIONS

Equipment Type/Size and Cooking Time/Temperature

1. In 8 quart stock pot, combine 2.5 quarts water & 6 cup Red Bean & Rice mix.
2. Bring to a boil over High heat. Reduce heat. Cover & simmer for 20 minutes

STANDARDIZED RECIPE

Recipe Name: BBQ Wrap

Number of Servings: 18

☐ Beans/Legumes ☐ Breakfast ☐ Condiment ☐ Dessert ☒ Entree ☐ Grain/Bread ☐ Salad/Salad Dressing ☐ Sandwich ☐ Sauce/Gravy ☐ Soup ☐ Vegetable/Fruit ☐ Other

INGREDIENTS List In Order Used	MEASURE Weight	Volume
Uncle Ben's Brand Red Beans & Rice, cooked		18 cups
Chicken, cooked, diced	3 lb 3 oz	
BBQ Sauce		4 1/2 cups
Lettuce, Iceberg, Shredded	3# 4 oz	18 cups
Cheddar Cheese, Shredded	1#	4 1/2 cups
Tortilla, 12"		18 ea

PREPARATION DIRECTIONS

1. To make filling, combine beans & rice, chicken & BBQ sauce. Heat and hold warm.
2. For each serving, warm tortilla. Spread 1 3/4 cup of filling evenly over tortilla, top with 1 cup of lettuce, 2 Tbsp cheese. Roll tightly and slice on bias.

Yield: (Gallons or Total Weight)

Portion Size: 2 - 1/2 tortilla

Recorded By: HWD Date: 9/24

Suggestions: Serve with coleslaw

Additional Information: Use Recipe L10 for BBQ Sauce or purchase Kraft BBQ sauce 1 gal.

For more information about completing this form, see the *Travel Guide* Chapter 3, Standardized Recipes.

For *purchased* food products use the Manufactured Food Product Recipe form in *Appendix 3B*. (A master copy for duplication is at the end of this chapter.)

Enter the following manufactured food product information on the form:

- Name of product
- Category of menu item (Check the appropriate box)
- Preparation directions
  (Equipment type/size and cooking time/temperature)
- Yield (Gallons or Total Weight)
- Portion Size
- Serving Suggestion
- Recorder's name and date
  (If staff has questions they will then know who to ask)
- Attach nutrition facts from manufacturer's label or nutrient data information to your Manufactured Food Recipe form
- Any additional information

Putting It All Together: Creating A Recipe Book

As you standardize the recipes, you will build your kitchen's recipe book. A recipe book is a looseleaf notebook for routine reference, containing one page for each recipe and every food item you use and every menu item you make, including condiments, milk, jellies, crackers, etc. Add pictures and color to make it fun as well as an operative chronology of your journey to Healthy School Meals.

A RECIPE BOOK

- Assists in training new kitchen staff by providing a complete and comprehensive guide of all menu items served to students.
- Provides a reference guide for all employees on how each menu item is to be prepared every time it is served, no matter who actually does the cooking or serving.
- Is the purchasing backbone as it defines everything needed for a complete menu.
- Is a labor scheduling device as it defines all of the necessary steps that must be completed to serve a specific menu.
- Is the starting place for any recipe adjustments that are made. Example: If there are complaints about the saltiness of a menu item, you must know how much salt is being used before you can reduce it. Note the change on the recipe page.
- Contains the needed information for nutrition analysis of menus.

The recipe book is the master blueprint for all the food items used and all the menu items served in all the meals you make for your students. It is a guide to what can be used in creating menus. If there is no recipe, then the item cannot be part of the menu. If a new menu item is desired, then a recipe must be created.

Here is an example of organizing your recipe book, using the sample Food Pyramid Choice Menu below.

Entree Choices
BBQ Wrap
Veggie Pizza
Chix Nuggets
Deli Sandwich

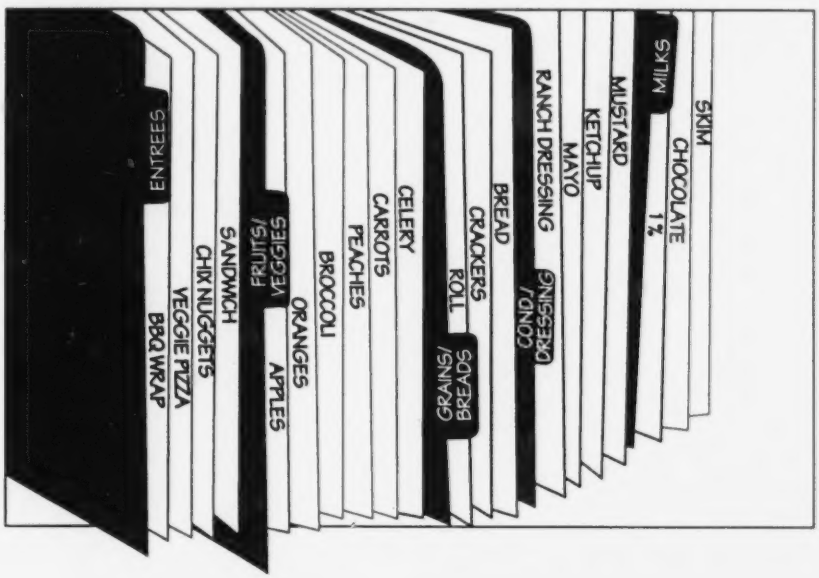
Variety Bar Choices
Apples
Orange Wedges
Broccoli Florets
Canned Commodity Peaches
Baby Carrots
Celery Sticks

Grain Choices
Whole Wheat Roll
Saltine Crackers
Sliced Whole Grain Bread

Condiments
Low-fat Ranch Dressing
Commodity Mayo
Ketchup
Mustard

Milk
1% White, Non-fat Chocolate, Skim

The recipe book should have a page for every item on this menu—standardized recipes and single food items. Below is an example of how your recipe book can be organized for the above menu.



Points to Remember When Building Your Recipe Book

It will be easy for you to build your recipe book using this *Travel Guide* as you continue toward Healthy School Meals. To organize your recipe book, use the provided labels and tabs. Place the appropriate recipe behind each tab.

- Beans/Legumes
- Breakfast Food
- Condiments & Salad Dressings
- Desserts
- Entrees
- Fruits/Vegetables
- Grains/Breads
- Sandwiches
- Sauces & Gravies
- Soups & Salads

MANUFACTURED FOOD PRODUCT RECIPE

Product Name _____

Manufacturer _____

- ❑ Beans/Legumes
- ❑ Breakfast
- ❑ Condiment
- ❑ Dessert
- ❑ Entree
- ❑ Grain/Bread
- ❑ Salad/Salad Dressing
- ❑ Sandwich
- ❑ Sauce/Gravy
- ❑ Soup
- ❑ Vegetable/Fruit
- ❑ Other

MANUFACTURER'S NUTRIENT SPECIFICATIONS

Nutrient Submission Form ❑Yes ❑No

Manufacturer's Nutrient Label Attached ❑Yes ❑No

Other ❑ Please Specify:

PREPARATION DIRECTIONS

Equipment Type/Size and Cooking Time/Temperature

Yield: _____
(Gallons or Total Weight)

Portion Size: _____

Recorded By: _____ Date: _____

Serving Suggestions: _____

Additional Information: _____

For more information about completing this form, see the *Travel Guide* Chapter 3, *(Standardized Recipes.)*

YOUR NOTES

STANDARDIZED RECIPE

- ❑ Beans/Legumes
- ❑ Breakfast
- ❑ Condiment
- ❑ Dessert
- ❑ Entree
- ❑ Grain/Bread
- ❑ Salad/Salad Dressing
- ❑ Sandwich
- ❑ Sauce/Gravy
- ❑ Soup
- ❑ Vegetable/Fruit
- ❑ Other

Recipe Name _____

Number of Servings _____

INGREDIENTS	MEASURE		PREPARATION DIRECTIONS
List In Order Used	Weight	Volume	

Yield: _____
(Gallons or Total Weight)

Portion Size: _____

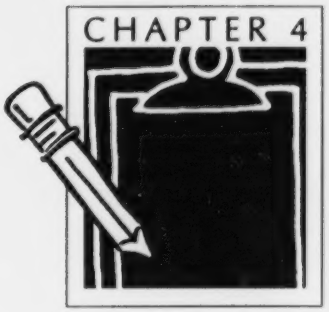
Recorded By: _____ Date: _____

Suggestions: _____

Additional Information: _____

For more information about completing this form, see the *Travel Guide* Chapter 3 (*Standardized Recipes.*)

YOUR NOTES



Keep a Daily Record
of Your Journey

MENU PRODUCTION RECORDS

Navigating This Chapter

This chapter highlights information to be entered on the Menu Production Record for all menu planning options. For Assisted NuMenus, Traditional, or Food Based menu planning, this chapter will guide you through the process to maintain and complete Menu Production Records. Included is a sample Menu Production Record form for your use. NuMenus users can maintain production records on their USDA approved software, or may keep Menu Production Records manually, using the form in this chapter.

Production Records are necessary for you to show that the required number of food components, food and/or menu items are offered daily. As much as possible, routinely complete your menu production records before food preparation, with all itemized information.

A menu production record can be very simple or very detailed. You are welcome to use the Menu Production Record form at the end of this chapter. (Use the master copy in *Appendix 4A* to make duplicates if you prefer this production record.) Other menu production form samples are available from your State Agency program consultant. If your district chooses to develop a different form that is more suitable to your individual needs, you must first submit it to your State Agency for approval.

Each form may be used for lunch or breakfast by circling the appropriate meal on the form. You must include the following information in every Menu Production form:

1. Meal Contribution
2. Menu Items
3. Quantity Prepared
4. Portion Size
5. Number of Servings Planned
6. Actual Servings Prepared
7. Food Left Over or Short
8. Comments
9. Number of Meals Served

EXAMPLE

Appendix 4A is the complete form to copy.

MENU PRODUCTION RECORD

Breakfast Lunch *(Circle One)*

Manager Signature _____

Date _____

School _____

Grade (circle) K-3 K-6 7-12 K-12 Other _____

❑ Food Based ❑ Traditional

❑ NuMenus ❑ Assisted NuMenus

NUMBER MEALS SERVED	Planned	Actual
Students		
Adults/a la carte	9	
Total		

Meal Contribution	Menu Items	Quantity Prepared (Recipe number or pounds, #10 cans, each, cases, etc.)	Portion Size (ounce, cup, each) K-3	K-6	7-12	Number Servings Planned	Actual Servings Prepared	Food Leftover or Short	Your Comments
1	2	3		4		5	6	7	8

Information You Must Record On Every Menu Production Form

MEAL CONTRIBUTION 1

Traditional and Food Based Menus production records include the amount of meat or meat alternate in ounces (M/MA); grains and breads equivalents (G/B); vegetable, fruit and juice in cups that the menu item contributes to the meal pattern. Document milk in fluid ounces as it contributes to the meal pattern. For example, document Sausage Pizza as 2 ounces M/MA, 3 G/B, 1/8 cup V/F. See *Appendix 1E* for component details for Traditional and Food Based Menus.

MENU ITEMS 2

Menu items include any single food or combination of foods offered as part of a reimbursable meal. Menu items under NuMenus and Assisted NuMenus options fall under the categories of entrees, milk and side dishes. Although this designation is not required for breakfast, recording this information will help cashiers and servers to understand the contribution of food items.

QUANTITY PREPARED 3

Indicate the amounts of food prepared in terms of pounds/ounces, #10 cans or recipe number. When unsure of how to list a particular food in purchase units, check to see how the food is listed the Food Buying Guide.

PORTION SIZE 4

Record portion size in terms that clearly describe the contribution to the school meal patterns. If weight or measure does not best describe the portion size of a product, call your State Agency for suggestions. You must be sure that a form of documentation such as a Standardized Recipe, Child Nutrition (CN) label or nutrition information is available to explain the portion size.

NUMBER SERVINGS PLANNED 5

Record each item by the number of servings planned. The number servings planned is an important factor in the nutrient analysis process.

ACTUAL SERVINGS PREPARED 6

Record the number of servings actually prepared for meal service. This may change from the *Number Servings Planned* if there are situations that alter the count on any day of food service—a school day of class field trips, for example.

AMOUNT OF FOOD LEFT OVER OR SHORT 7

Foods left over or short should be recorded as a number of servings.

COMMENTS 8

Record any substitutions you make in the menu. Include student comments about menu items and any special circumstances or situations. Your comments will be a helpful future reference throughout your journey.

NUMBER OF MEALS SERVED 9

Record the total number of student and adult meals served. Do not include *a la carte* sales or second servings.

YOUR NOTES

MENU PRODUCTION RECORD

Breakfast Lunch *(Circle One)*

NUMBER OF MEALS SERVED	Planned	Actual
Students		
Adults/a la acarte		
Total		

Manager Signature _____

Date _____

School _____

Grade *(Circle One)* K-3 K-6 7-12 Other _____

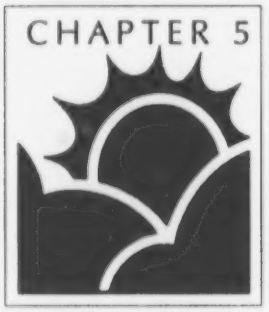
❑ Food Based ❑ Traditional

❑ NuMenus ❑ Assisted NuMenus

Meal Contribution	Menu Items	Quantity Prepared Recipe number or pounds, #10 cans, each, cases, etc.	Portion Size Ounce, cup, each			Number Servings Planned	Actual Servings Served	Food Leftover or Short	Your Comments
			K-3	K-6	7-12				

Meal Contribution	Menu Items	Quantity Prepared Recipe number or pounds, #10 cans, each, cases, etc.	Portion Size Ounce, cup, each			Number Servings Planned	Actual Servings Served	Food Leftover or Short	Your Comments
			K-3	K-6	7-12				

CHAPTER 5



Seasonal Conditions
(Seasonings)
Add Spice to Life!

CONDIMENTS

Navigating This Chapter

This chapter guides you through the process of recording condiments on the Menu Production Record, and provides four different methods to measure and record the amount of condiments served to your students. All programs, regardless of which menu planning option is used, must record condiment use.

What are condiments?

Condiments are small amounts of any topping, spread, seasoning or dressing that is added to a menu item to enhance flavor and acceptability.

COMMON CONDIMENTS

- Spreads
  Examples: Catsup, mustard, salsa, relish, butter, cream cheese, jam or jelly, honey, syrup
- Seasoning
  Examples: Salt, pepper, seasoning salt, soy sauce, tabasco sauce
- Dressing
  Examples: Mayonnaise, ranch dressing, thousand-island dressing
- Toppings
  Examples: Bacon bits or other food items when using less than 1/8 cup per serving...such as one tablespoon sunflower seeds on a chef salad or one tablespoon chopped olives on a slice of pizza.

Condiments are not limited to these examples

Although used in relatively small amounts, condiments significantly add to the calories, fat, and sodium in a menu. For this reason, condiments are now included in the nutrient analysis. They must be noted in the menu item column on the Menu Production Record form for nutrient analysis. It will be to your advantage to list the planned condiment amounts as close as possible to the actual amounts used.

How do I record them?

List condiments on the Menu Production Record by the individual item, such as pickles, croutons, catsup, etc. Note whether the condiment is prepared on-site or is served "as purchased." A recipe will be needed for condiments prepared on-site, even if preparation is simply adding a seasoning packet to mayonnaise. The amount can be recorded by weight or volume. Following are recommended methods to measure and record the amount of condiments served.

1. WEIGH

Weighing is the most accurate method to measure ingredients. Use a scale if one is available. Weigh and record the weight of the full container of the condiment before and after lunch (Example A). The difference of the two weights is the amount used. If the container is refilled during meal service, the container will need to be weighed each time it's refilled (Example B).

EXAMPLE A

	Weight before meal (ounces)
Minus	Weight after meal (ounces)
Equals	**Weight served** (ounces)

EXAMPLE B

	Weight before meal	46 oz.
minus	Weight before refill	- 12 oz.
equals	**Weight served first**	**=34 oz. (A)**
	Weight of refill #1	42 oz.
minus	Weight before refill	- 16 oz.
equals	**Weight served refill**	**=26 oz. (B)**
	Weight of refill #2	20 oz.
minus	Weight after service	- 12 oz.
equals	**Weight served refill**	**= 8 oz. (C)**
	Weight served **(A)**	34 oz.
plus	Weight served **(B)**	+ 26 oz.
plus	Weight served **(C)**	+ 8 oz.
Equals	**TOTAL amount served**	**= 68 oz.**

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2. MEASURE

Another method of recording condiment usage is measuring by volume. This method is less accurate and messy compared to recording by weight. Use measuring cups or quarts if available. For example, to measure butter by volume, place the solid mass of butter in a measuring cup before the meal. Fill the measure with cold water, then remove the butter. The amount of water displaced in the cup is the volume of butter offered. Repeat this procedure after the meal with the leftover butter. The difference in the two measures is equal to the amount of butter used.

3. COMPARE

Determine the volume of serving containers by filling with water and then pouring water into a measuring container. Record the measured amount and keep it handy for future reference.

EXAMPLE

Crock contains 1 quart, 2 cups of water
Condiment pump contains 1 pint of water

Now fill the container with the condiment before the meal and then estimate the amount left in the container after the meal. (Example: A 16-ounce syrup container is used and filled with catsup. After lunch, one-half of the catsup is left. Therefore, 8 ounces is the estimated total used.)

4. READ

Simply read the manufacturer's label on the can. It specifies the volume of condiment the can contains.

What if I use individual packets?

List each condiment individually. Record the net weight of an individual packet and the number of packets served.

To find the net weight, check the outside of the box or contact the distributor, broker or manufacturer. For catsup, mustard, relish, or mayonnaise the net weight will be listed in grams. Salad dressing is listed in ounces.

YOUR NOTES

CHAPTER 6

Track How Manufactured Foods Affect Your Journey

PROCESSED FOOD PRODUCT NUTRIENT DATA

Navigating This Chapter

This chapter guides you through the process of collecting processed food product nutrient data. For programs using NuMenus, nutrient data must be collected and entered into your software for all manufactured foods that are not included in the National Nutrient Database for Child Nutrition Programs.

Programs using Traditional or Food Based menu planning need to only collect processed food nutrient data for those products which are on a menu during the week of an SMI review. In other words, School Food Authorities using Traditional or Food Based programs need to only collect this data for the school week selected for the SMI review. Users of Assisted NuMenus do not need to collect nutrient data.

Each processed food item is distinct in the nutrients it contributes to your menu. The manufactured product's nutrition data shows the amount of nutrients it contains.

PRODUCT NUTRITION DATA IS AVAILABLE IN TWO FORMS

- "Nutrition Facts" is a section on the product label. See *Appendix 6A* for an example. The USDA approved computer software will convert the percent of Daily Values to actual nutrient amounts.
- Or you can obtain manufacturer's nutrient data directly from your food manufacturer, food distributor and food broker. Ask to speak to the manufacturer's corporate dietitian. Review page 52 for a Nutrient Data Information example. See *Appendix 6B* for a master copy of a Nutrient Data Submission form to duplicate.

As Purchased or As Served?

Every manufacturer must clarify if their product nutrition data is *as purchased* or *as served*. *As served* are those processed foods that do not have ingredients added or fat absorbed during preparation. *As purchased* are all foods that have ingredients added in preparation, such as milk, eggs, and oil in bakery mixes; foods with varying preparation methods, like bake or fry; or foods that gain or lose moisture or fat during preparation.

Moisture and Fat changes will need to be accounted for in products with nutrient data based on *as purchased*. See *Appendix 6C* for the common percentage of change in moisture and fat during food preparation.

Which foods require nutrient data from the manufacturer?

Typical food items that will need nutrient data include heat and serve food (Examples: burritos, frozen pizza, chicken nuggets), salad dressings, cookies, snack chips or refried beans. Store this information in your kitchen's recipe book.

Generic items generally do not require nutrient data. Examples are milk, fresh, frozen or canned fruits and vegetables, grain items (cereal, pasta, rice) and unprocessed meat. These items are already included in the National Nutrient Database for Child Nutrition Programs. However, you must be specific on the menu production records about the form of these items. (Example: peaches in light syrup, or non-fat chocolate milk, or ground beef with less than twenty percent fat, commodity cheese blend, or brown rice.)

MANUFACTURED FOODS THAT REQUIRE NUTRIENT DATA
YES
Typical heat and serve food items
Generic items already included in the National Nutrient Database
NO

What information from the manufacturer is necessary for my nutrient analysis?

Attain and record the information below. Record the nutrient content information per portion.

NUTRIENT INFORMATION REQUIRED FOR ANALYSIS	
• Brand	• Protein in grams
• Product Name	• Total fat in grams
• Product Code Number	• Percentage of calories from saturated fat
• Package Size	• Calcium in milligrams
• Portion Size	• Iron in milligrams
• Number Servings per package	• Vitamin A in Retinol equivalents
• Calories	• Vitamin C in milligrams

How do I collect nutrition data if it is not included on the manufacturer's product label?

- Make a list of all products needing nutrient data.
- Call or write the manufacturer, food distributor or food broker to request the nutrient data information be provided to you in writing. You can also send a Nutrient Data Submission Form For Processed Food Product Analysis. See *Appendix 6B* for a master copy to duplicate.
- Note the date when you requested the nutrient information.
- Make sure the nutrition data indicates if it is based on as *purchased* or *as served*. If not indicated, call the manufacturer for clarification.
- Check off each nutrient data sheet received on the product list.
- Review the nutrient data. You may decide to choose another product with a different nutrient composition.

You should know that the manufacturer's nutrient data are not always complete! If that is the case, you must recontact the manufacturer to order the missing information. Note the date the request was made. The manufacturer may not have the information, but you tried to get it!

Child Nutrition (CN) Labels have nothing to do with the nutrient analysis and do not need to be collected for nutrition analysis. However, they do have useful information on the component contribution to a meal if you are using the Traditional Menu Planning or Food Based Menus systems.

EXAMPLE

See *Appendix 6B* for a complete form to copy.

NUTRIENT DATA SUBMISSION FORM FOR PROCESSED FOOD PRODUCT ANALYSIS

Data submitted for this product is *AS SERVED* ❑ or *AS PURCHASED* ☑ (Check One)

Brand Uncle Ben's
Product Name Red Beans and Rice
Product Code 03613
CN Label Number
Package Size 24.4 pounds ____ fluid ounces ____ grams
Standard Serving 1/2 cup (100 grams or servings)
Number of Servings per Package 24
Weight per Serving 120 grams
Analysis Based On 1 cup

Nutrients	Measurement	Nutrient Value	Unit Weight
Calories	xxx	200	kcal
Protein	xx.xxx	7	grams
Total Fat	xx.xxx	1.0	grams
Saturated Fat	x.xxx	.5	grams
Carbohydrates	xx.xxx	41	grams
Total Dietary Fiber	xx.xx	5	grams
Cholesterol	xx.xxx	0	milligrams
Calcium	xx.x	42	milligrams
Iron	xx.xxx	3.3	milligrams
Sodium	xx.x	750	milligrams
Vitamin C	x.xx	17	milligrams
Vitamin A	x.x	42 RE	IU
Fat Change*	xxxx	%	N/A
Moisture Change*	xxxx	%	N/A

** If Available*

NOTE A value must be entered for each nutrient. If the food item does not contain a specific nutrient, enter zero (0).

Preparation Instructions
Include ingredient/quantity to be added, and cooking methods, time and temperature

What source of Nutrient data was used to calculate the nutrient analysis?
❑ Laboratory analysis (analytical)
❑ Handbook # calculations (calculated)
❑ Combination of the above (analytical and calculated)
❑ Nutrition label
☑ Other (Specify) Nutrient Assessment for School Food service

CHAPTER 7

Prepare Your Travel Diary
to Share With
The State Agency

THE SMI REVIEW

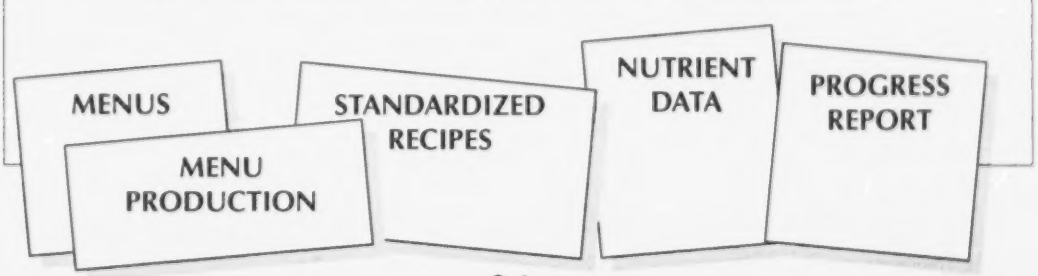
Navigating This Chapter

This chapter gives a brief overview of what to expect if your school is selected for a School Meals Initiative (SMI) review.

The State Agency is required to conduct a SMI review in each School Food Authority once every five years. At a minimum, the State Agency must review one school site for each type of menu planning system that is used within the School Food Authority. If your school is the one selected for the SMI review, then all your SMI "souvenirs" come into play! A five-day period (one week) will be selected as the review week. In order to do the SMI review, the State Agency will need to review your collection of all required information.

INFORMATION YOU MUST PROVIDE FOR SMI REVIEW

- Menus for the entire review week
- Standardized Recipes for all menu items served during the review week
- Menu Production records for the review week
- Nutrition Facts from label or Nutrient Data Submission from manufacturer for each processed or convenience food used during the review week
- If you use NuMenus or Assisted NuMenus you must provide your inhouse nutrient analyses that apply to the review week.
- Documentation of your progress to meet the nutrient standards. Review an example of Your Progress Report on the next page. See *Appendix 7A* for a master copy of Your Progress Report form.



EXAMPLE

See *Appendix 7A* for a complete form to copy.

YOUR PROGRESS REPORT TO REACH HEALTHY SCHOOL MEALS

ACCOMPLISHMENT	Yes ✓	No ✓	Date to Complete	Done ✓
I have talked to my staff about the SMI requirements and Dietary Guidelines	✓		9/1/97	✓
I have selected a menu planning option	✓		9/9/97	✓
I have talked to staff about selected menu planning option	✓		9/13/97	✓
I have reviewed my menus for items needing a standardized recipe and those requiring manufacturer's nutrient data	✓		9/27/97	✓
I have talked to my staff about standardizing recipes	✓		10/18/97	
We conduct taste tests with students, and staff on menu items	✓		11/1/97	
We have standardized one recipe	✓		9/27/97	✓
We have standardized five recipes	✓		10/12/97	✓
We have standardized ten recipes			11/1/97	

The State Agency will do a nutrient analysis for districts using the Traditional and Food Based Menus planning options. For those using NuMenus or Assisted NuMenus, the district's nutrient analysis will be reviewed for accuracy.

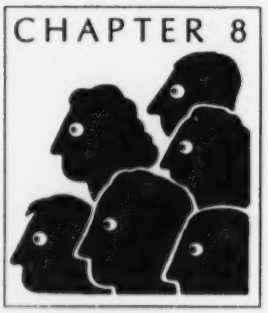
An on-site evaluation will also be made to determine if the recorded information and daily practices are consistent. Based on the results of the nutrient analysis and on-site evaluation, recommendations will be designed to bring menus into compliance with nutrient standards.

Never feel discouraged about a mistake or oversight that may be recognized during your SMI review. Value any error as your opportunity to learn more. Your program consultant will help you solve problems and will answer questions.

Think of the end of this journey as the beginning of an even greater adventure. Keep your suitcase packed and the *Travel Guide* current. As changes are made in menu items throughout the school year, and from year to year, make it a custom to routinely update the information. This *Travel Guide* is also a resource for new routes you can explore.

Respect your success. Your journey toward Healthy School Meals has improved the health, education and future of Oregon's children!

Share Your Journey
to Reach Healthy School Meals



TRAVEL COMPANIONS

Navigating This Chapter

This chapter describes how you can build a travel team to support your SMI program.

A successful journey should include a travel team of staff, students, teachers, parents and vendors. Include everyone who will be affected by the changes in your school's food service. These travel companions will help you meet the Dietary Guidelines and nutrient standards. They will also assist in gathering the information the State Agency requires to complete your nutrient analysis.

Staff

- Share what you have learned about the process.
- Explain why it is important to comply with the Dietary Guidelines and nutrient standards.
- Share nutrition information as you learn it along your journey.
- Obtain staff cooperation in using standardized recipes. Explain how production schedules and job duties are simplified when using standardized recipes.

Principal and Teachers

- Explain why schools will be planning meals that comply with the Dietary Guidelines.
- Seek their support in making healthy changes. Emphasize that the result will be healthy, well-fed children, ready to learn. (Explain that the concept of being well-fed may require a shift of perspective in your community, but solid research supports your plan for change.)
- Ask for their ideas to accomplish the goal.
- Build collaboration to make it a common goal.
- Offer assistance and resources to take nutrition information to the classroom.
- As you become aware of nutrition education resources—Child Nutrition Program lending library, Team Nutrition Materials, NETPRO Trainers—share them with your team.

Students

- Do student surveys where you set healthy parameters. (Example: *Which of the following entrees would you prefer on a rainy, winter day? 1: Minestrone Soup and Crusty Oat Bread 2: Rice Pilaf with Chicken Bits 3: Fresh Fruit and Cottage Cheese Plate)*
- Do taste-testing of standardized recipes and products from manufacturers.
- Recruit students from a computer class to enter product data for your nutrient analysis. Have them run the nutrient analysis as a class project.
- Start and support an advisory group to develop a team approach to Healthy School Meals.

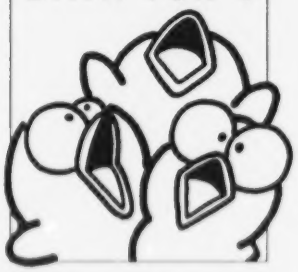
Parents

- Provide nutrition information on take-home menus about the healthy meals you are serving.
- Be prepared to answer parent's questions about Healthy School Meals.
- Provide nutrition information to the community through a Food Service column in your school's parent newsletter. This is a positive way to introduce changes and gain community support.
- Build collaboration with parents by asking for parent volunteers to assist with implementing self-serve variety bars in elementary schools. (Example: monitoring or helping very small students with trays).
- Work with parent groups to raise money to purchase variety food bars if your district has not been able to purchase them. This kind of teamwork ensures success!

Vendors

- Be specific when telling vendors what types of products you need to conform to the recommendations of the Dietary Guidelines. Tell them that lowfat is not the only nutrition concern.
- Be specific about low sodium, whole grain, lowfat product expectations.
- Explain the new regulations clearly so they can develop products that meet the recommendations of Dietary Guidelines.
- Help vendors change their perspective toward entrees in NuMenus and Assisted NuMenus planning options. Request entree items with lots of vegetables and grains and minimal amounts of meats and cheese.
- Request tasty, attractive plant-based menu items (Example: *vegetable* lasagna, *brown* rice and *bean* burritos).

CHAPTER 9



Interpret the Language of Your Journey

DEFINITIONS

Navigating This Chapter

This chapter defines terms used throughout this Travel Guide.

As Purchased
Manufactured, processed foods to which ingredients are added during preparation.

As Served
Manufactured, processed foods that do not require added ingredients, nor do they absorb fat during preparation.

Assisted NuMenus (Assisted Nutrient Standard Menu Planning) **ANSMP**
Assisted NuMenus is a menu planning option designed for those schools that do not have the technical computer resources to implement NuMenus, but want to take advantage of the flexibility of non-food based menu planning. Assisted NuMenus allows the menu planner to use the expertise and services of outside entities, such as another school district, a private consultant, or a business to provide menus that have been pre-analyzed to meet nutrient standards. Any menu changes made by SFA or the school may require menus to be reanalyzed to assure that nutrients standards were met. It is the SFA or school's responsibility to obtain Assisted NuMenus from a credible source. *Appendix 1D* includes a full description of Assisted NuMenu requirements.

Child Nutrition (CN) Label
A product label that contains a statement clearly identifying the contribution that the product makes toward Food Based or Traditional menu requirements. The label carries a USDA warranty that the product has been analyzed to determine the contribution that a single serving of the product makes to the requirements. The menu option requirements specify the foods and the minimum amounts that must be served in Food Based Menus and Traditional Menus. The CN label does not apply to menus developed under NuMenus or Assisted NuMenus. The CN label statement does not provide the list of nutrients as shown on the Nutrition Facts food label. A CN label does not assure that a product is superior to products without a CN label, nor does it assure that a product meets Dietary Guidelines.

Component
(See Food Component)

Condiment
A small amount of a food that is used on or with another food to enhance flavor. Condiments must be included in the nutrient analysis of the menu.

Coordinated Review Effort CRE
A unified administrative review of the National School Lunch Program. The State Agency is required to perform a CRE on each School Food Authority (SFA) once every five years to ensure that the SFA complies with the provisions of the National School Lunch and Child Nutrition Acts. USDA Food and Nutrition Service (FNS) assists the State Agency in this comprehensive, on-site evaluation by accompanying the State Agency on some CREs.

Dietary Guidelines for Americans
A publication developed by the United States Department of Agriculture and the Department of Health and Human Services that provides advice for healthy Americans over age two, about food choices that promote health and prevent disease. Also called *Dietary Guidelines*, this information is updated and reprinted every five years based on current scientific research concerning nutrition and disease. This *Travel Guide* refers to Dietary Guidelines for Americans, but guidelines are also available for other cultures of the world.

Food Based Menus
A menu planning option that is similar to Traditional Menu Planning in that it is based on food components and food items. Under Food Based Menus, the portion size for fruits and vegetables is increased and the number of grain/bread servings is increased. Specific portion sizes are required by age groups. This menu planning option does not require schools to conduct a nutrient analysis of the menus. The State Agency will conduct the analysis at the time of the SMI review. See *Appendixes 1B* and *1E* for a full description of required food components and food items.

Food Component
The basic food components of the school lunch pattern for Traditional and Food-Based menu planning. The four food components that must be included in a reimbursable lunch include: Meat/Meat Alternate (M/MA); Grains/Bread(G/B); Fruit/Vegetable (F/V); and Milk. See *Appendix 1E* for more information.

Food and Nutrition Service FNS
A branch of the United States Department of Agriculture which oversees the administration of several federal food programs, including the National School Lunch and School Breakfast Programs.

Food Item
One of the required five food items that must be included in the school lunch menu pattern for Traditional and Food-Based menu planning. These five food items fall within the four food components and include 1 serving of M/MA, 1 serving of G/B, 2 servings of Fruit/Vegetable (F/V), and 1 serving of Milk. See *Appendix 1A* for more information.

Food Pyramid Choice Menus FPCM
A food service system that offers students at least three entree choices (one plant-based/meatless entree is strongly recommended). It also offers a self-serve variety bar to students with at least six different fruits and vegetables, three grain items and a variety of liquid milk every day. Whole, unrefined foods are highly recommended and at least one grain option every day should be a whole grain product. Students are allowed to select one entree and one milk, if they choose (no specific menu item is required to be selected), and to select as many fruits, vegetables, and grain products as they will eat. Research has shown that FPCM leads to significantly reduced food waste and encourages students to eat more fruits, vegetables and grains.

Grains/Breads
The new term for the Bread/Bread Alternate component for Traditional or Food Based Menu planning options.

Ingredient
An individual item used in a recipe. Ingredient usually defines the item as it comes into inventory although it can also include sub-recipes. An ingredient may be as simple as *apple*, or it may be a specified manufactured product such as *Inventory Item #1234 Burrito*.

Menu
A list of all food items that are to be served within a certain time frame. The menu is used for preparing production schedules, managing inventory and marketing meal programs.

Menu Item
Under NuMenus or Assisted NuMenus, any single food or combination of foods offered as part of the reimbursable meal. Menu items fall under the categories of entrees, milk and side dishes. See *Appendix 1C* for more information.

National Food Service Management Institute NFSMI
A publicly funded national research center that provides information, conducts applied research and offers training and educational opportunities for child nutrition programs.

National Nutrient Database for Child Nutrition Programs
A database (loaded on all USDA approved software packages) that includes all USDA commodity foods, all USDA standardized recipes and nutrient data from a variety of manufactured food products. This is a large database which is updated regularly.

National School Lunch Program NSLP
The program under which participating schools operate a nonprofit lunch service in accordance with federal and state regulations.

NuMenus
(Also referred to as Nutrient Standard Menu Planning or NSMP).
A method of developing menus based on a computer analysis of key nutrients in all food items offered over a week's time. This menu planning option requires the School Food Authority to use a computer and USDA approved menu planning software to analyze menus for compliance with nutrient standards by age/grade group before serving meals as planned. Nutrient analysis of menus is derived from calorie/nutrient information provided in USDA's *National Nutrient Database for Child Nutrition Programs* (a database loaded on all the approved software packages) and product information entered by the SFA. Under this menu planning option, there is no requirement for specific food components nor of any specific types of food with the exception of liquid milk. All foods served count toward the nutrient analysis. *See Appendix 1D* for more information.

Nutrient
Substances within foods that are needed by living organisms for life and growth.

Nutrition Facts Food Label
Mandatory labeling on most packaged foods that provides information about the nutrient content of the manufactured product. The nutrition label states the serving size and the number of calories, amount of fat, saturated fat, cholesterol, sodium, carbohydrate, dietary fiber, sugars and protein per serving. It also states the amount of vitamin A, vitamin C, calcium and iron as a percent of the RDA of a two thousand calorie per day diet.

Offer Versus Serve **OVS**
A food service system defined by USDA where students must be offered all the required foods of a reimbursable meal, as defined by the four approved menu planning options, but the student may decline some items. OVS is mandatory in high school lunch and breakfast programs and is optional below senior high school level. At the discretion of the School Food Authority, students below the senior high level may participate in OVS.

Preparation Instructions
Detailed, step-by step instructions that include information on needed equipment, preparation order or sequence, temperatures, times for cooking and holding, safe storing procedures, and how to handle each specified recipe ingredient (Example: wash and peel or thaw).

Recommended Dietary Allowances **RDAs**
Nutrient recommendations for a day, based on age and gender. RDAs are set for 19 nutrients, based on safe and adequate levels that meet the needs of almost all healthy people. The RDAs are revised periodically as scientists learn more about the relationship between nutrients and health.

Recipe
The preparation instructions, serving suggestions, and list of all ingredients that are used in the creation of a specific completed dish.

Reimbursable Meal
A meal which meets established menu patterns and is served to an eligible child.

School Food Authority SFA
The governing body which is responsible for the administration of one or more schools and has the legal authority to operate Child Nutrition programs.

School Meals Initiative SMI
The title given to the final rule, written by USDA, that amends the National School Lunch Program and School Breakfast Program. It is part of an integrated, comprehensive plan for promoting the health of the nation's school children by updating the nutrition standards for school meals and by providing state agencies and local food service operators with the technical assistance and tools to meet these standards. See the *Introduction* for more information.

School Meal Initiative (SMI) Review
A comprehensive evaluation of School Food Authority (SFA) compliance with nutrition standards as set forth in Federal regulations. The SMI review is conducted by the State Agency once every five years and may coincide with the CRE review for the SFA. The SMI includes an analysis of one week's menus, and technical assistance for the SFA in meeting the Dietary Guidelines. The State Agency must review one school in the SFA for each different menu planning option selected and used by the SFA.

Serving Suggestions
Specific ideas on how the menu item can be served, what best accompanies the dish, and what condiments will best enhance its flavor.

Standardized Recipe
A recipe that is produced and reproduced using identical methods and ingredients so that it produces a consistently standardized yield. See *Chapter 3* for thorough description and requirements.

State Agency
The agency designated to administer federal Child Nutrition Programs within a state. Within our state the Oregon Department of Education is the designated State Agency.

Sub Recipe
A recipe that is commonly used as an ingredient in other recipes (Example: Tartar sauce prepared in your school kitchen for a fish sandwich).

Team Nutrition
A nationwide integrated program designed to help implement the School Meals Initiative. The mission of Team Nutrition is to improve the health and education of children by creating innovative public and private partnerships that promote food choices for a healthful diet through the media, school, families and the community.

Traditional Menu Planning
This menu planning option is one schools have been using since the beginning of the National School Lunch Program in 1946. Traditional Menu Planning uses food components and food items as the basis for menu planning. It is one of two food based menu planning options allowed by USDA under the School Meals Initiative. This menu planning option does not require schools to conduct a nutrient analysis of the menus. The State Agency will conduct the analysis at the time of the SMI review. See *Appendixes 1B* and *1E* for a full description of required food components and food items.

United States Department of Agriculture USDA
A federal agency with jurisdiction over Child Nutrition and other federal food and agriculture programs.

Vegetable Protein Product VPP
Safe and suitable edible products produced from vegetable (plant) sources, including, but not limited to soybeans, peanuts, wheat and corn, that are used to resemble and substitute, in part, for meat, poultry or seafood as specified in federal regulations.

CHAPTER 10

Learn Interesting
Routes to Higher Adventure

RESOURCES

This chapter lists by topics the resource materials for Food Service directors, on-site Food Service managers and Food Service staff members. Ask your State Agency consultant how you can access resources after you identify which information may help you reach Healthy School Meals.

RESOURCES FOR A FOOD SERVICE DIRECTOR

Nutrition Requirements

- USDA *Healthy School Meals Training;* workshop and manual
- USDA *Assisted NuMenus;* manual
- USDA *Approved Software* list
- ASFSA/SFSF *Trimming the Fat;* manual and companion disk
- NFSMI *Managing Child Nutrition (CN) Programs to Teach Healthy Food Practices;* video series and handouts

Menu Planning for School Meals

- USDA *Menu Planner for Healthy School Meals;* manual
- USDA *Assisted NuMenus;* manual
- ASFSA/SFSF *Trimming the Fat;* manual and companion disk
- NFSMI *Creating Healthy Meals for the Mainline;* videos and handouts

Procurement

- USDA *Food Buying Guide*
- *Choice Plus;* handbook
- NFSMI *First Choice;* handbook
- *Purchasing and the Dietary Guidelines;* video and handouts
- *INSIGHT-Purchasing Decisions;* newsletter
- *Impact of Food Procurement on Dietary Guidelines for Americans;* report

Financial Management

- ASFSA/SFSF *Meeting the Challenge*

Marketing

- USDA *Tool Kit for Healthy School Meals;* recipes and promotion manual
- USDA *Healthy School Meals;* training workshop and manual
- USDA *Great Nutrition Adventure Action Packet;* video and materials
- ASFSA/SFSF *Target Your Market;* manual and video
- NFSMI *Culinary Techniques for Healthy School Meals;* 13 videos and lessons
- *Hey, What's Cookin';* NFSMI video
- *Go for the Gold with Customer Service;* NFSMI video and handbook
- *Promoting Healthy Food Practices;* NFSMI video and handouts

Food Production

- USDA *Menu Planner for Healthy School Meals;* manual
- USDA *School Lunch Challenge;* recipes
- USDA *Tool Kit for Healthy School Meals;* recipes and training manual
- NFSMI *On the Road to Professional Food Preparation;* video and handbook
- *Culinary Techniques for Healthy School Meals;* NFSMI videos and lessons
- *Healthy Cuisine for Kids Workshop*
- *Get Ready, Get Set, Go for Quality Service;* NFSMI video and handbook

Program Management

- USDA *Healthy School Meals Training;* workshop and manual
- ASFSA *Keys to Excellence;* manual
- *INSIGHT—Job Functions and Tasks for School Nutrition Managers and District Directors;* NFSMI newsletter
- *Champions of Change: Child Nutrition Personnel;* video
- *Enhancing Productivity in School Foodservice;* videos and handouts

Equipment

- *Energy Conservation for School Food Service;* manual
- *Guidelines for Equipment to Prepare Healthy Meals;* NFSMI report

All Topic Areas

- USDA *Healthy School Meals Resource System*
- *MEALTALK;* USDA discussion group
- NFSMI Customer Service Help Desk Your Healthy Food (1-800-YHF-LINE)
- NFSMI *Research Related to Child Nutrition Programs;* report
- *Healthy Cuisine for Kids;* workshops
- *ONE—Orientation for Nutrition Employees;* videos and lessons
- *Keys to Excellence Support Materials;* bibliography

RESOURCES FOR AN ON-SITE FOOD SERVICE MANAGER

Nutrition Requirements

- *Healthy School Meals Training;* USDA workshop and manual
- *Assisted NuMenus;* USDA manual
- *USDA Approved Software* list
- *Trimming the Fat;* ASFSA/SFSF manual and companion disk
- *Managing Child Nutrition Programs to Teach Healthy Food Practices;* NFSMI video series and handouts

Menu Planning for School Meals

- *Menu Planner for Healthy School Meals;* USDA manual
- *Assisted NuMenus;* USDA manual
- *Trimming the Fat;* ASFSA/SFSF manual and companion disk
- *Creating Healthy Menus for the Mainline;* NFSMI videos and handouts
- *Participation: Key to Healthy Food Practices;* NFSMI video and handouts

Procurement

- USDA *Food Buying Guide*
- *Choice Plus;* USDA handbook
- *First Choice;* NFSMI handbook
- *Purchasing and the Dietary Guidelines;* video and handouts

Financial Management

- USDA *Healthy School Meals Training;* workshop and manual
- ASFSA/SFSF *Meeting the Challenge;* manual
- *Purchasing and the Dietary Guidelines;* video and handouts

Marketing

- USDA *Tool Kit for Healthy School Meals;* recipes and promotion manual
- USDA *Healthy School Meals Training;* workshop and manual
- *Great Nutrition Adventure Action Packet;* USDA video and materials
- *Culinary Techniques for Healthy School Meals;* NFSMI videos and lessons
- NFSMI *Hey, What's Cookin';* video
- *Go for the Gold with Customer Service;* NFSMI video and handbook
- *Promoting Healthy Food Practices;* NFSMI video and handouts

Food Production

- USDA *Menu Planner for Healthy School Meals;* manual
- *Tool Kit for Healthy School Meals;* USDA recipes and training manual
- USDA *School Lunch Challenge;* recipes
- USDA *Culinary Training Institutes*
- USDA *Culinary Training;* videos
- NFSMI *Healthy Cuisine for Kids;* workshop
- *Healthy Cooking for Kids;* NFSMI video and handbook
- *Get Ready, Get Set, Go for Quality Service;* NFSMI video and handbook
- *Preparation and the Dietary Guidelines;* NFSMI video and handouts

Program Management

- *Healthy School Meals Training;* USDA workshop and manual
- ASFSA *Keys to Excellence;* manual
- *Personnel That Make a Difference;* NFSMI video and handouts
- *ONE—Orientation for Nutrition Employees;* NFSMI videos and handouts

Equipment

- *ONE—Orientation for Nutrition Employees;* NFSMI videos and handouts

Food Safety

- *Serving it Safe/A Manager's Tool Kit;* USDA training manual and CD-ROM
- *ONE—Orientation for Nutrition Employees;* NFSMI videos and handouts

Computer Skills

- *Healthy School Meals Training;* USDA workshop and manual
- USDA Approved Software list
- NFSMI *Customer Service Help Desk Your Healthy Food Line* (1-800-YHF-LINE)

Life Skills

- *Healthy School Meals Training;* USDA workshop and manual
- *ONE—Orientation for Nutrition Employees;* NFSMI videos and handouts

Children with Special Needs

- *Nutrition Management for Children with Special Needs;* NFSMI workshops
- *Costs Associated with Providing Meals for Children with Special Needs;* report
- *CARE: Special Nutrition for Kids;* video and manual
- *Special Foods for Special Kids;* workbook

All Topic Areas

- USDA *Healthy School Meals Resource System*
- *MEALTALK;* USDA discussion group
- NFSMI *Customer Service Help Desk Your Healthy Food Line* (1-800-YHF-LINE)
- *Keys to Excellence Support Materials;* bibliography

RESOURCES FOR ALL FOOD SERVICE STAFF

Nutrition Requirements

- USDA *Menu Planner for Healthy School Meals* manual
- USDA *Assisted NuMenus* manual
- *Healthy Cooking for Kids* NFSMI; video and handbook
- NFSMI *Managing Child Nutrition Programs to Teach Healthy Food Practices;* videos

Food Production

- USDA *Tool Kit for Healthy School Meals;* recipes and manual
- USDA *Menu Planner for Healthy School Meals* manual
- USDA *Culinary Training Institutes*
- *Culinary Training;* USDA Videos
- *Healthy Cooking for Kids;* NFSMI video and handbook

- *Get Ready, Get Set, Go for Quality Service;* NFSMI video and handbook
- *Culinary Techniques for Healthy School Meals;* NFSMI videos and lessons
- *ONE—Orientation for Nutrition Employees;* NFSMI video and lessons

Food Service Systems

- USDA *Tool Kit for Healthy School Meals;* recipes and manual
- *Personnel That Make a Difference;* NFSMI video and handouts
- *Get Ready, Get Set, Go for Quality Service;* NFSMI video and handbook
- *ONE—Orientation for Nutrition Employees;* NFSMI video and lessons
- *Culinary Techniques for Healthy School Meals;* NFSMI videos and lessons
- *On the Road to Professional Food Preparation;* NFSMI video and handbook
- *Enhancing Productivity in School Foodservice;* NFSMI videos and handouts)

Computer and Math Skills

- USDA Approved Software list
- NFSMI *Customer Service Help Desk Your Healthy Food Line* (1-800-YHF-LINE)

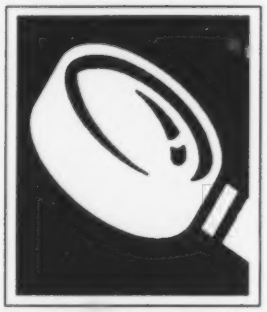
Sanitation and Safety

- *Serving it Safe;* CD ROM self-instruction and USDA training manual
- *ONE—Orientation for Nutrition Employees;* NFSMI video and lessons

All Topic Areas

- *MEALTALK;* USDA discussion group
- *Healthy School Meals Resource System;* USDA electronic
- NFSMI *Customer Service Help Desk Your Healthy Food Line* (1-800-YHF-LINE)
- *ONE—Orientation for Nutrition Employees;* NFSMI video and lessons
- *Keys to Excellence Support Materials;* bibliography
- *Health Cuisine for Kids Workshop;* NFSMI, University of Mississippi manual
- *The Healthy Edge In Schools, Eating;* Dietary Guidelines manual
- *Nutrition and Your Healthy: Dietary Guidelines for Americans;* USDA manual
- *Strategies For Success;* SHAPE manual by California Dept. of Eduction
- *A Tool Kit for Healthy School Meals;* USDA manual and recipes

YOUR NOTES



APPENDIX

Navigating The Appendix

The following pages contain very detailed information. Use this Appendix to help research and answer your technical questions, rather than guide your journey to Healthy School Meals.

You can identify each appendix by the number at the top of the appendix page. It begins with the number of the chapter to which that Appendix is a technical resource. For example: "Appendix 1C, page 2" is the second page (page 2) of the third appendix (C) which contains technical information regarding Chapter 1 (Appendix 1) in this Travel Guide.

YOUR NOTES

	Traditional 4 Food Components 5 Food Items	**Food-Based** 4 Food Components 5 Food Items	**NuMenus** 3 Menu Items 3 Menu Items	**Assisted NuMenus** 3 Menu Items
Criteria	Meets requirements if all 4 food components are offered daily and weekly in correct quantities Foods offered are analyzed over a week by the State Agency	Meets requirements if all 4 food components are offered daily and weekly in correct quantities Foods offered are analyzed over a week by State Agency	Meets requirements if at least 3 menu items offered daily •1 menu item must be entree •1 menu item must be fluid milk •1 menu item is a side dish Analyzed by approved USDA software program	SFA obtains ready-to-use menu package meeting NuMenus criteria. Nutrient analysis included in purchased menu package Substitutions may require reanalysis
Age/Grade	May use 1 meal pattern for all ages	Two Required: K-6 , 7-12	At least two required: K-6 7-12 More are optional	Same as NuMenu criteria
Menu	Only food items count toward meeting the food based menu requirements.	Only food items count toward meeting the food based menu requirements.	All foods offered count toward the nutrient standard analysis	Same as NuMenu criteria
Grains/Bread Food Component	At least 1 serving/day; 8 servings/week	K-6: 12 servings/week 7-12: 15 servings/week 1 serving/day may be a bread/grain dessert	No Requirement	
Fruit/Vegetable Food Component	2 servings of two different fruits and/or vegetables to equal 3/4 cup/day	K-6: 2 servings of fruits and/or vegetables to equal 3/4 cup/day + additional 1/2 cup/week 7-12: 2 servings fruits and/or vegetables to equal 1 cup/day	No Requirement	
Meat/Meat Alternate Food Component	2 oz meat or meat alternate	2 oz meat or meat alternate	No Requirement	
Milk Food Component	8 fluid oz. (1/2 pint)	8 fluid ounces (1/2 pint)	Fluid milk must be offered as a menu item but there are no quantity requirements	
Reimbursable Meals	Must have full servings of 5 food items	Must have full servings of 5 food items	Must have 3 menu items: entree, milk, one other item	
Offer Vs Serve	May decline any one or two food items	May decline any one or two food items	Must select an entree and at least 1 other menu item	

YOUR NOTES

MEETING BREAKFAST MEAL PATTERN REQUIREMENTS

Planning appetizing breakfast menus requires originality and imagination. Plan breakfasts that consider students' regional, cultural and personal food preferences. Include well-liked and familiar foods. Plan for contrast in texture, flavor, size and shape of foods to create interest.

Fluid Milk

Fluid milk may be served as a beverage or on cereal or both.

Juice/Fruit/Vegetable

Fresh, canned, frozen and dried fruits may be used interchangeably. To aid in the absorption of iron from bread and cereal products, it is recommended that a fruit or vegetable high in vitamin C be offered daily.

Grains/Breads

Use a variety of hot breads, such as cornbread, and different kinds of muffins and biscuits. Breakfast sandwiches, pancakes, waffles or French toast may be offered. Cereals may be served hot or as prepackaged, preportioned dry cereals, including enriched or whole-grain wheat, corn, rice and oats. Some of the iron-fortified cereals on the market may also contain considerable amounts of sugar and should be avoided.

Meat/Meat Alternates

Offering meat/meat alternates as part of the breakfast menu is optional. Plan to use a variety of meat/meat alternates, such as eggs, ground beef, turkey ham, cheese, nuts and seeds or nut and seed butters, dried peas and beans, fish or poultry. Alternate egg dishes with other main dishes. For variety use lowfat ingredients to prepare combination dishes, such as grits-cheese casserole, breakfast burritos, sandwiches and pizza. Mix nuts and seeds with dried fruits to serve as is or as a topping for hot cereal. Nuts and seeds can also be blended into pancake and waffle batters.

Whenever possible, serve lower fat meat/meat alternates, such as fresh or frozen lean meat, poultry or fish or cooked dry beans and peas instead of processed meats. Use cheese made from skim milk, such as mozzarella. Mix lowfat cottage cheese with dried fruits to use as a spread for breads in place of cream cheese or butter. Bacon cannot be credited as meat/meat alternate due to its high percentage of fat. Offer bacon seldom, if ever.

Offering Choices

As often as possible, offer choices in breakfast foods. Offering choices even within only one component, such as fruit/vegetable, will increase customer satisfaction and reduce food waste.

SCHOOL BREAKFAST PATTERN FOR TRADITIONAL MENU PLANNING

Meal Components	Minimum Quantities			USDA Recommendation
	Ages 1-2	Ages 3, 4, 5	Grades K-12	
Milk	1/2 cup	3/4 cup	1 cup	Lowfat, skim or buttermilk for children over the age of 2
Fruit/Vegetable	1/4 cup	1/2 cup	1/2 cup	A juice or fruit or vegetable that is a good source of Vitamin C
CHOOSE ONE SERVING FROM EACH OF THE FOLLOWING COMPONENTS OR TWO SERVINGS FROM ONE COMPONENT				
Grains/Breads One of the following or an equivalent combination				
• Whole-grain or enriched bread	1/2 slice	1/2 slice	1 slice	
• Whole-grain or enriched biscuit, roll, muffin, etc.	1/2 serving	1/2 serving	1 serving	
• Whole-grain, enriched or fortified cereal (See *Appendix 1E*)	1/4 cup or 1/3 ounce	1/3 cup or 1/2 ounce	3/4 cup or 1 ounce	
Meat/Meat Alternates One of the following or an equivalent combination				
• Lean meat, poultry or fish	1/2 ounce	1/2 ounce	1 ounce	No more than 1 ounce of nuts or seeds may be served in any one meal.
• Cheese	1/2 ounce	1/2 ounce	1 ounce	
• Large egg	1/2 egg	1/2egg	1/2 egg	
• Peanut butter or other nut or seed butters	1 Tbsp.	.1 Tbsp.	2 Tbsp.	
• Cooked dry beans/peas	2 Tbsp.	2 Tbsp.	4 Tbsp.	
• Nuts and/or seeds	1/2 ounce	1/2 ounce	1 ounce	

CAUTION: Children under 5 are at a higher risk of choking than older children. It is recommended that nuts and/or seeds be served ground or finely chopped in a prepared food.

TRADITIONAL SCHOOL LUNCH PATTERN REQUIREMENTS

The school lunch pattern, described in the chart on the following page, provides a simple framework for planning nutritious and well-balanced lunches. The requirements and recommendations for school lunches are designed to provide approximately one-third of the Recommended Dietary Allowances (RDAs) for various age groups of children. It is not expected that each lunch will provide one-third of the RDAs for all nutrients, but that when averaged over a period of time in which a wide variety of foods are served, the goal will be met.

To meet the requirements of the School Meals Initiative using Traditional Menu planning, a school lunch must contain a specified quantity of each of the food components (meat/meat alternate, vegetable/fruit, grains/breads and milk). The quantities vary by age/grade group.

PLEASE NOTE

Group IV is the one lunch pattern that will satisfy all requirements if no portion size adjustments are made

Also note that the chart specifies "Minimum Quantities." Larger servings and other foods may be served at meals to improve acceptability, to satisfy students' appetites, to provide additional energy and, if carefully chosen, to increase the nutritional quality of the lunch.

The first step toward ensuring that the menus served and claimed for reimbursement in the district meet requirements is to read and understand the school lunch pattern. Please note that on the chart on the following page, the meal requirements are specified according to kinds and amounts of food for each of the four food **components**. A minimum of five **food items** must be offered in order to meet requirements (the vegetable/fruit component must come from two or more sources). Menu items are the actual foods served such as tacos, fruit salad and muffins. **Menu items** may contain one or more components or food items. Understanding the difference between components, food items and menu items is essential when planning menus that meet requirements. The chart below gives examples of each.

Components	Food Items	Menu Items
1. Meat/Meat Alternate	1. Meat/Meat Alternate	1. Chicken
2. Vegetable/Fruit	2. Vegetable/Fruit	2. Potato
3. Grains/Breads	3. Vegetable/Fruit	3. Green Beans
4. Milk	4. Grains/Breads	4. Hot Roll
	5. Milk	5. Milk

Many times a menu item will contain only one food item as in the menu items listed in the last example. Some menu items that contain two or more food items follow:

Menu Item	Meat/MA Food Items	Vegetable/Fruit Food Items	Grains/Breads Food Items
Hamburger (3 Food Items)	Beef 2 oz.	Lettuce/Tomato (1/4 c—count as one food item)	Bun
Tacos (3 Food Items)	Beef 1-1/2 oz. Cheese 1/2 oz.	Lettuce/Tomato (1/4 c.—count as one food item)	Enriched Taco Shell (2)
Pizza 2 Food Items)	Cheese 2 oz.		Pizza Crust

SCHOOL LUNCH PATTERN BY AGE/GRADE GROUPS

USDA recommends, but does not require, that portions be adjusted by age/grade group to better meet the food and nutritional needs of children according to their ages. If portions are adjusted, Groups I-IV are minimum requirements for the age/grade groups specified. If portions are not adjusted, the Group IV portions are the portions to serve all children.

Food Components	Food Items	Minimum Quantities: Ages 1-2 (Group I)	Ages 3-4 (Group II)	Grades K-3 Ages 5-8 (Group III)	Grades 4-12 Ages 9 & over (Group IV)	Recommended Quantities: Grades 7-12 ages 12 & over (Group V)	
Meat or Meat Alternate (quantity of the edible portion as served)	A serving of one of the following or a combination to give an equivalent quantity:						• Must be served in the main dish or the main dish and only one other menu item. • Vegetable protein products and enriched macaroni with fortified protein may be used to meet part of the meat or meat alternate requirement. Food and Nutrition Service fact sheets on each of these alternate foods give detailed instructions for use.
	Lean meat, poultry or fish	1 oz.	1-1/2 oz.	1-1/2 oz.	2 oz.	3 oz.	
	Cheese	1 oz.	1-1/2 oz.	1-1/2 oz.	2 oz.	3 oz.	
	Large egg(s)	1/2	3/4	3/4	1	1-1/2	
	Cooked dry beans or peas	1/4 cup,	3/8 cup,	3/8 cup	1/2 cup	3/4 cup	
	Peanut butter or other nut or seed butters	2 Tbsp.	3 Tbsp.	3 Tbsp.	4 Tbsp.	6 Tbsp.	
	Peanuts, soynuts, tree nuts or seeds, as listed in program guidance, meet no more than 50% of the requirement and must be combined in the meal with at least 50% of other meat or meat alternates (1 oz. of nuts/ seeds=1 oz. of cooked lean meat, poultry or fish).	1/2 oz.=50%	3/4 oz.=50%	3/4 oz.=50%	1 oz.=50%	1-1/2 oz.=50%	
Vegetables or Fruits	2 or more servings of vegetables or fruits or both to total.	1/2 cup	1/2 cup	1/2 cup	3/4 cup	3/4 cup	• No more than one half of the total requirement may be met with full strength fruit or vegetable juice. • Cooked dry beans or peas may be used as a meat alternate or as a vegetable, but not as both in the same meal.
Grains/Breads (See *Appendix 1E*)	Servings of bread or bread alternate.	5 per week	8 per week	8 per week	8 per week	10 per week	• Enriched macaroni with fortified protein may be used as a meat alternate or as a bread alternate but not as both in the same meal. NOTE: *Food Buying Guide for Child Nutrition Programs,* Program Aid No. 1331 (1984) provides the information for the minimum weight of a serving.
	Must be enriched or whole grain.						
	A serving is a slice of bread or an equivalent serving of biscuits, rolls, etc., or 1/2 cup of cooked rice, macaroni, noodles, other pasta products or cereal grains or a combination of any of the above.	minimum of 1/2 serving per day	minimum of 1 serving per day	minimum of 1 serving per day	minimum of 1 serving per day	minimum of 1 serving per day	
Milk (As a beverage)	Fluid milk must be offered.	3/4 cup (6 fl. oz.)	3/4 cup (6 fl. oz.)	1/2 pint (8 fl. oz.)	1/2 pint (8 fl. oz.)	1/2 pint (8 fl. oz.)	

MEETING BREAKFAST MEAL PATTERN REQUIREMENTS

Planning appetizing breakfast menus requires originality and imagination. Plan breakfasts that consider students' regional, cultural and personal food preferences. Include well-liked and familiar foods. Plan for contrast in texture, flavor, size and shape of foods to create interest.

Fluid Milk

Fluid milk may be served as a beverage or on cereal or both.

Juice/Fruit/Vegetable

Fresh, canned, frozen and dried fruits may be used interchangeably. To aid in the absorption of iron from bread and cereal products, it is recommended that a fruit or vegetable high in vitamin C be offered daily.

Grains/Breads

Use a variety of hot breads, such as cornbread, and different kinds of muffins and biscuits. Breakfast sandwiches, pancakes, waffles or French toast may be offered. Cereals may be served hot or as prepackaged, preportioned dry cereals, including enriched or whole-grain wheat, corn, rice and oats. Some of the iron-fortified cereals on the market may also contain considerable amounts of sugar and should be avoided.

Meat/Meat Alternates

Offering meat/meat alternates as part of the breakfast menu is optional. Plan to use a variety of meat/meat alternates, such as eggs, ground beef, turkey ham, cheese, nuts and seeds or nut and seed butters, dried peas and beans, fish or poultry. Alternate egg dishes with other main dishes. For variety use lowfat ingredients to prepare combination dishes, such as grits-cheese casserole, breakfast burritos, sandwiches and pizza. Mix nuts and seeds with dried fruits to serve as is or as a topping for hot cereal. Nuts and seeds can also be blended into pancake and waffle batters.

Whenever possible, serve lower fat meat/meat alternates, such as fresh or frozen lean meat, poultry or fish or cooked dry beans and peas instead of processed meats. Use cheese made from skim milk, such as mozzarella. Mix lowfat cottage cheese with dried fruits to use as a spread for breads in place of cream cheese or butter. Bacon cannot be credited as meat/meat alternate due to its high percentage of fat. Offer bacon seldom, if ever.

Offering Choices

As often as possible, offer choices in breakfast foods. Offering choices even within only one component, such as fruit/vegetable, will increase customer satisfaction and reduce food waste.

SCHOOL BREAKFAST PATTERN FOR FOOD BASED MENUS

Meal Component	Minimum Quantities Required		
	Ages 1-2	Preschool	Grades K-12*
Milk (Fluid): (As a beverage, on cereal or both)	1/2 cup	3/4 cup	8 ounce
Juice/Fruit/Vegetable: Fruit and/or vegetable; or full-strength fruit or vegetable juice	1/4 cup	1/2 cup	1/2 cup
CHOOSE ONE SERVING FROM EACH OF THE FOLLOWING COMPONENTS OR TWO SERVINGS FROM ONE COMPONENT			
Grains/Breads*: One of the following or an equivalent combination:			
• Whole-grain or enriched bread	1/2 slice	1/2 slice	1 slice
• Whole-grain or enriched biscuit, roll, muffin, etc.	1/2 serving	1/2 serving	1 serving
• Whole-grain, enriched or fortified cereal (See *Appendix 1E*)	1/4 cup or 1/3 ounce	1/3 cup or 1/2 ounce	3/4 cup or 1 ounce (whichever is less)
Meat/Meat Alternates:			
Meat/poultry or fish	1/2 ounce	1/2 ounce	1 ounce
Cheese	1/2 ounce	1/2 ounce	1 ounce
Egg (large)	1/2 egg	1/2 egg	1/2 egg
Peanut butter or other nut or seed butters	1 Tbsp.	1 Tbsp.	2 Tbsp
Cooked dry beans and peas	2 Tbsp.	2 Tbsp.	4 Tbsp.
Nuts and/or seeds (as listed in program guidance)[1]	1/2 ounce	1/2 ounce	1 ounce

CAUTION: Children under 5 are at a higher risk of choking than older children. It is recommended that nuts and/or seeds be served ground or finely chopped in a prepared food.

[1] No more than 1 ounce of nuts and/or seeds may be offered in any one meal.

* Option for Grades 7-12: one additional serving of Grains/Breads should be served daily in addition to the components listed in this column.

FOOD BASED SCHOOL LUNCH PATTERN REQUIREMENTS

The school lunch pattern, described in the chart on the following page, provides a simple framework for planning nutritious and well-balanced lunches. The requirements and recommendations for school lunches are designed to provide approximately one-third of the Recommended Dietary Allowances (RDAs) for various age groups of children as specified by the School Meals Initiative. It is not expected that each lunch will provide one-third of the RDAs for all nutrients, but that when averaged over a period of time in which a wide variety of foods are served, the goal will be met.

To meet the requirements of the National School Lunch Program using food based menu planning, a school lunch must contain a specified quantity of each of the food components (meat/meat alternate, vegetable/fruit, grains/breads and milk.) The quantities vary by age grade group.

Also note that the chart specifies "Minimum Quantities." Larger servings and other foods may be served at meals to improve acceptability, to satisfy students' appetites, to provide additional energy and, if carefully chosen, to increase the nutritional quality of the lunch.

The first step toward ensuring that the menus served and claimed for reimbursement in the district meet requirements is to read and understand the school lunch pattern. Please note that on the chart, the meal requirements are specified according to kinds and amounts of food for each of the four food **components**. A minimum of five **food items** must be offered in order to meet requirements (the vegetable/fruit component must come from two or more sources.) **Menu items** are the actual foods served such as tacos, fruit salad and muffins. Menu items may contain one or more components or food items. Understanding the difference between components, food items and menu items is essential when planning menus that meet requirements.

The chart below gives examples of each:

Components	Food Items	Menu Items
1. Meat/Meat Alternate	1. Meat/Meat Alternate	1. Chicken
2. Vegetable/Fruit	2. Vegetable/Fruit	2. Potato
3. Grains/Breads	3. Vegetable/Fruit	3. Green Beans
4. Milk	4. Grains/Breads	4. Hot Roll
	5. Milk	5. Milk

Many times a menu item will contain only one food item as in the menu items listed in the above example. Some menu items that contain two or more food items follow:

Menu Item	Meat/MA Food Items	Vegetable/Fruit Food Items	Grains/Breads Food Items
Hamburger (3 Food Items)	Beef 2 oz.	Lettuce/ Tomato (1/4 cup counts as one food item)	Bun
Tacos (3 Food Items)	Beef 1-1/2 oz. Cheese 1/2 oz.	Lettuce/ Tomato (1/4 cup counts as one food item)	Enriched Taco Shell (2)
Pizza (2 Food Items)	Cheese 2 oz.		Pizza Crust

SCHOOL LUNCH PATTERN FOR FOOD BASED MENUS

Meal Component	Minimum Quantities Required				
	Ages 1-2	Preschool	Grades K-6	Grades 7-12	Option for Grades K-3
Meat/Meat Alternate (quantity of the edible portion as served)					
• Lean meat, poultry or fish	1 oz.	1-1/2 oz.	2 oz.	2 oz.	1-1/2 oz.
• Cheese	1 oz.	1-1/2 oz.	2 oz.	2 oz.	1-1/2 oz
• Large egg(s)	1	3/4	1	1	3/4
• Cooked dry beans or peas	1/2 cup	3/8 cup	1/2 cup	1/2 cup	3/8 cup
• Peanut butter or other nut or seed butters	2 Tbsps.	3 Tbsp.	4 Tbsp.	4 Tbsp.	3 Tbsp.
The following may be used to meet no more than 50% of the requirement and used in combination with any above:					
Peanuts, soynuts, tree nuts or seeds, as listed in program guidance, or an equivalent quantity of any combination of the above meat or meat alternate (1 oz. of nuts/seeds=1 oz. of cooked lean meat, poultry or fish)	1/2 ounce = 50%	3/4 ounce = 50%	1 ounce = 50%	1 ounce = 50%	3/4 ounce = 50%
Vegetables/Fruits (2 or more servings of vegetables or fruits or both)	1/2 cup	1/2 cup	3/4 cup plus additional 1/2 cup over a week[1]	1 cup	3/4 cup
Grains/Breads Must be enriched or whole grain. A serving is a slice of bread or an equivalent serving of biscuits, rolls, etc., or 1/2 cup of cooked rice, macaroni, noodles, other pasta products or cereal grains. (See *Appendix 1E*)	5 servings per week—minimum of 1/2 per day[1]	8 servings per week—minimum of 1 per day[1]	12 servings per week—minimum of 1 per day[1] [2]	15 servings per week—minimum of 1 per day[1] [2]	10 servings per week—minimum of 1 per day[1] [2]
Milk (As a beverage)	6 oz.	6 oz.	8 oz.	8 oz.	8 oz.

[1] For the purposes of this chart, a week equals five days

[2] Up to one grains/breads serving per day may be a dessert

NUTRIENT STANDARD MENU PLANNING

NuMenus

NuMenus is a computer-based menu planning system which allows menus to be planned that meet nutrition standards. Software specifically designed to comply with all program requirements provides technical support to analyze and to modify menus if they do not comply with the standards. Because the software allows direct measurement of the nutrient content of the meals, it is not necessary to have food component or quantity requirements. In order to facilitate identification of those meals that are eligible for federal reimbursement, meals must contain at least three menu items: an entree, fluid milk and a side dish. There is considerable flexibility to determine what constitutes an entree and a side dish.

Assisted NuMenus

Assisted NuMenus is designed for those schools that do not have the technical resources to implement NuMenus but want to take advantage of some of its features. This option allows districts to use the expertise of outside entities, such as other school districts, the state office or a consultant, to develop a menu cycle, recipes, procurement specifications and preparation methods that will enable the school to produce meals that meet the nutrition standards. Meals must be produced according to the specifications developed by the outside entity. Any changes made by the school district need to be reanalyzed to assure that the nutrient standards are met. A Resource Guide, developed by USDA, consisting of five-week cycle menus for lunch and breakfast is available. This resource includes production records, preparation and pull lists, recipes, product specifications and nutrient analyses for the cycle menus.

Program Requirements—NuMenus and Assisted NuMenus

NuMenus and Assisted NuMenus allow any foods in any quantities to meet the nutrition goals. The nutrition goals require meeting the Recommended Dietary Allowances (RDA) for breakfast (1/4 RDA) and lunch (1/3 RDA), age appropriate calorie goals and the Dietary Guidelines for Americans. Nutrient Standards are the required level of calories and nutrients for a specific grade or age group.

The Nutrient Standards for lunch are set for these grade groups:

- Preschool
- Grades K-6
- Grades 7-12
- Plus an optional standard for grades K-3

School lunches shall provide the minimum calorie and nutrient levels for each of the required grade groups as shown in the chart on the following page. These minimums should be achieved in meals averaged over a school week.

The Nutrient Standards for breakfast are set for these grade groups:

- Preschool
- Grades K-12
- Plus an optional standard for grades 7-12

NOTE: See page 16 for the chart showing the required minimum nutrient standards, by grade, for lunch and breakfast.

OPTIONAL AGE NUTRIENT STANDARDS FOR NUMENUS

Schools have the option to provide calorie and nutrient levels for lunches and breakfasts for these age groups:
•Ages 3-6 •Ages 7-10 •Ages 11-13 •Ages 14-17

NOTE **A**: 30 percent or less over a school week • **B**: 10 percent or less over a school week

LUNCH Nutrients and Energy Allowances	Ages 3-6	Ages 7-10	Ages 11-13	Ages 14 and above
Energy Allowances/Calories	588	667	783	846
Total Fat (as a percent of actual total food energy)	A	A	A	A
Saturated Fat (as a percent of actual total food energy)	B	B	B	B
RDA for Protein (grams)	7.3	9.3	15	16.7
RDA for Calcium (mg)	267	267	400	400
RDA for Iron (mg)	3.3	3.5	4.5	4.5
RDA for Vitamin A (RE)	158	233	300	300
RDA for Vitamin C (mg)	14.6	15	16.7	19.2

BREAKFAST Nutrients and Energy Allowances	Ages 3-6	Ages 7-10	Ages 11-13	Ages 14 and above
Energy Allowances/Calories	419	500	588	625
Total Fat (as a percent of actual total food energy)	A	A	A	A
Saturated Fat (as a percent of actual total food energy)	B	B	B	B
RDA for Protein (grams)	5.5	7	11.25	12.5
RDA for Calcium (mg)	200	200	300	300
RDA for Iron (mg)	2.5	2.5	3.4	3.4
RDA for Vitamin A (RE)	119	175	225	225
RDA for Vitamin C (mg)	11	11.25	12.5	14.4

SELECTING THE CORRECT NUTRIENT STANDARD

Not all schools' grade structures will match the Nutrient Standard grade age groups.

Districts may develop their own customized nutrient standard groups corresponding to the age or grade groups in their school(s). At least two Nutrient Standards should be used with any school that has grades K-12. Where a broad spectrum of ages and grades are present, the standard should be changed at or right above the sixth grade level.

When more than one grade or age is outside of the specified group, the menu planner should use two of the required groups or develop a customized age/grade group.

Example 1: Somewhere Elementary serves grades K-8. Two nutrient standards should be used for this school. The K-6 nutrient standard would be used for the grades K-6 and the 7-12 nutrient standard would be used for grades 7 and 8.

Example 2: Somewhere Middle School serves children in grades 5-8. Two nutrient standards should be used for this school. The K-6 nutrient standard would be used for grades 5 and 6, the 7-12 nutrient standard would be used for grades 7 and 8.

Example 3: Grade K-7 or grade 6-9 schools, could include the one grade outside the group using the K-6 nutrient standard and 7-12 grade groups nutrient standard, respectively.

Example 4: If the district plans centralized menus for several schools with grades within the K-6 range, even though the schools have varying age or grade groups, all of the menus may be planned for the grades K-6 nutrient standard.

Example 5: Anywhere School District plans the menu for all three of the elementary schools within the district. One school serves children in grades K-6, another serves pre-K-4, and the third school serves K-5. Menus for these schools can be planned using the nutrient standard for grades K-6. However, if each school is allowed to plan its own menu, then menu planning and nutrient analysis will need to be done for each school site.

Optional Age Group

For schools using the age grouping chart the groups are adjusted by creating additional Nutrient Standards for other age categories by weighting, combining and/or averaging the RDA for different age groups. (See the previous page for a complete chart for ages 3-17).

Special Consideration at Age 11

The greatest differential in caloric needs occurs between ages 10-11 or between grades 5-6. A one-year age difference does not make a great difference in the RDA requirements for each nutrient when weighted for the predominant group. However, when several ages are added in on either side of the 10-11 age break, either too few nutrients and calories will be provided for those 11+ years or too many calories and fat will be provided for those 10 years and under. The Nutrient Standards developed by the district for customized grade and age groups must be added to the approved nutrient analysis software system. However, the nutrient standards specified by USDA will already be in any software that has been approved by USDA.

Weekly Averages

Planned menus will be analyzed over a school week using an approved nutrient analysis software system based on the projected servings of each menu item.

School Week Definition

A school week is defined as a minimum of three consecutive days and a maximum of seven consecutive days. If there are fewer than three consecutive days in a week (from Sunday to Saturday), menus may be combined with either the previous or the following week. For example, when there are only two days of school during the week of Thanksgiving, those two days could be combined with either the week before or the week after Thanksgiving.

EXAMPLE FOR DETERMINING SCHOOL WEEK

Choose
November 14, 15, 16, 17, 18, 21 & 22
(seven days)

NOVEMBER

M	T	W	T	F
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	HOLIDAYS		
28	29	30		

OR

Choose
November 21, 22, 28, 29, 30
and December 1, 2
(seven days)

NOVEMBER

M	T	W	T	F
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	HOLIDAYS		
28	29	30	1	2

Weighted Nutrient Analysis

Planned menus will be analyzed and compared to the appropriate Nutrient Standard using weights based on the projected servings of each menu item and condiment.

APPENDIX 1D, *page 5*: NUMENUS AND ASSISTED NUMENUS WEIGHTED AVERAGE

Determining Projected Servings for Weighted Averages

1. The nutrition analysis program will calculate nutrients and provide a production sheet based on projected servings.

2. Estimate the number of projected servings based on past production records and meal counts.

Student Choice	Menu Projected	Servings
Select One	Chicken Nuggets Fish Fillet Spaghetti/Meat Sauce	600 100 200
Select Two	French Fries Tossed Salad Applesauce Orange Juice	875 325 350 250
Select One	Dinner Roll Hamburger Bun Garlic Bread	400 100 300
Select One	Whole Milk 1% Chocolate Milk Nonfat Milk	150 700 50

Question

Can weighted averages be done at the school district level or must it be done on a school-by-school basis?

Answer

The school district will do weighted averaging at the district level if they use central menus. They will need a system to aggregate the data on the amounts that will be prepared for reimbursable student meals from the individual schools. If meal planning is done at the individual school level, weighting would be based on the amounts prepared for reimbursable student meals at that school.

Combining Breakfast and Lunch Nutrient Standards

NuMenus and Assisted NuMenus allow schools the option to combine the total nutrients for breakfast and lunch together in proportion to the participation in each meal. Your software system may have the capability to combine the breakfast and lunch analysis in proportion to your participation. This is an optional feature of USDA-approved software and may not be in all nutrient analysis software.

Approved Software and Database

When performing nutrient analysis in NuMenus, the school must use USDA-approved software. USDA-approved software uses the National Nutrient Database for Child Nutrition Programs (NNDCNP). A list of approved software is available from the Oregon Department of Education Child Nutrition Programs.

Standardized Recipes and Preparation Techniques

In the planning and serving of NuMenus, standardized recipes and preparation techniques must be used. In order to qualify as a standard recipe, a recipe must have an established and specified yield, portion size and quantity. In addition, the ingredients must be constant in measure and preparation. Examples of standardized recipes include the *USDA Quantity Recipes for Schools* and the *New School Lunch and Breakfast Recipes...Tool Kit for Healthy School Meals*. Schools may also use local or state standardized recipes. When entering recipe ingredients in computer software, select ingredients that best reflect the form that will be consumed by a customer.

Processed Foods

When processed foods are used in NuMenus, the nutrient analysis of these products must either be in the National Nutrient Database for Child Nutrition Programs or entered into the district's local database. The nutrient analysis of the actual product must be used.

A Nutrient Analysis or a "Nutrient Fact Label" must be requested from the manufacturer or broker of any processed foods used, including commodity foods sent for processing. Request the nutrient analysis as part of your bid specifications and use the Nutrient Data Submission form in *Appendix 6B*. This nutrition information must then be added to the nutrient analysis software. (Contact the software supplier or software manual for directions on how to add this product information to your software.)

Menu Item Definition

NuMenus deal with menu items instead of food components and food items. A menu item may be any single food or combination of foods. In NuMenus, meals are required to have three menu items for lunch and for breakfast.

Lunch

The three categories of lunch menu items are:

- Entree
- Milk
- Sides Dishes
  (Any other food excep
  a food of minimal nutritional value)

EXAMPLE

Hamburger on a Bun	Entree
Fruit Salad	Side Dish
Oatmeal Raisin Cookie	Side Dish
Fluid Milk Choices	Milk

The determination of whether a food can be counted as one menu item or two, depends on how it is served. If it is served as one item, it is counted as one item. If it is served as two items, it is counted as two items.

Entree

An entree is a menu item that is a combination of foods or a single food that is served as the main course. To determine if an entree can be counted as one menu item or more than one menu item when it consists of a combination of foods, look at the way it is served. If an entree contains a combination of foods and some of these foods belong to different food groups (i.e., meat, bread, fruits and vegetables, milk, etc.), each food should not be counted as a separate menu item but as part of the entree (one menu item total). For example, if a menu planner traditionally serves turkey with gravy over mashed potatoes, then the turkey, gravy and mashed potatoes are considered the entree: one menu item. To make two menu items, serve the potatoes on the side as a separate item.

EXAMPLE

One Item	Two Items
Hamburger served on a Bun	Hamburger Pattie served separate from Bun
Turkey and Gravy served on Mashed Potatoes	Turkey and Gravy served separately from Mashed Potatoes
Burrito Grande (Tortilla, Meat, Rice, Tomato, Lettuce, Salsa served together)	Beef Burrito served separately from Spanish Rice

Question

When using NuMenus, and a menu item is Turkey and Gravy on Potatoes, would this still count as an entree if the gravy was not served? If the potato was not served?

Answer

Because this item is served as one menu item (potatoes topped with turkey and gravy), it would not count as an entree if the potatoes were missing. If it were served as two separate menu items (Turkey and Gravy, Mashed Potatoes), then the turkey alone would be the entree. However, if it is served separately it would also be considered two menu items for Offer Versus Serve and could affect the number of items the student would be required to choose. Gravy is considered a condiment, so the menu item would still count as an entree if it were served without gravy.

Question

What foods could be considered an entree when using NuMenus?

Answer

An entree may be a combination of foods or a single food item that is offered as the main course. Nowhere in the regulations does it state that an entree must contribute the majority of the calories of a reimbursable meal.

Milk

Schools are required to offer fluid milk as a beverage. Schools are also required to offer a variety of fluid milk consistent with children's preferences in the prior year. If a type of milk represents less than 1 percent of the total amount of milk consumed in the previous year, the school may elect not to offer that type of milk for lunch. To assist in meeting the goal of 30 percent calories from fat, the serving of lowfat (2 percent and 1 percent) or skim milk is encouraged. Milk can be flavored or unflavored.

In NuMenus there is no "beverage" menu item category—"milk" is the menu item. If a school district wants to offer beverages in addition to milk, these beverages must be offered as one of the side dish choices that are part of the school's unit-priced meal. They may not be offered as a choice against milk. The school district's policy should be clearly publicized so students understand their options.

Side Dishes and Condiments

Any other menu item offered is considered a side dish unless it is a condiment. While condiments must be taken into consideration when planning and analyzing for nutrients, they are not counted as menu items for the purpose of meeting the minimum requirement of three menu items for lunch and breakfast. Condiments include such items as relishes, catsup, mustard, jelly, gravies, whipped toppings and table spreads.

Breakfast

The three categories of menu items for breakfast are:

- Fluid milk served as a beverage
- Any two other foods except a food of minimal nutritional value.

There is no requirement for an entree for breakfast.

EXAMPLE

Egg Stratta	Menu Item 1
Orange Juice	Menu Item 2
Fluid Milk Choices	Milk

Foods of Minimal Nutritional Value

Schools using NuMenus or Assisted NuMenus are required to comply with the rule regarding foods of minimal nutritional value.

Inclusion in Nutrient Analysis

If a food of minimal nutritional value is a part of a menu item, the nutritional contribution can be counted when the nutritional analysis of the meals is calculated (for example, marshmallows on sweet potato casserole). The food of minimal nutritional value should only be a garnish or incidental part of the menu item; in no case can it be more than 50 percent of the menu item.

Question

How much creditable food must be combined with a food of minimum nutritional value to make it a considered creditable?

Answer

The food of minimal nutritional value should only be a garnish or incidental part of the menu item; in no case can it be more than 50 percent of the menu item.

Theme Bars

Salad bars and other theme bars such as pasta bars, taco bars, potato bars, etc., may be served in NuMenus and are considered reimbursable lunches when they consist of:

- An entree or menu item that is the main course
- Fluid milk, served as a beverage
- Side dishes (any other food except a food of minimal nutritional value)

For ease of analysis, menu planners should make an analysis of their salad/theme bar as a recipe. Schools that have more than one typical salad/theme bar need to make one analysis for each type of bar so that each one is represented. The theme bar recipes are treated as another menu choice and averaged into the weekly nutrient analysis based on projected servings.

Field Trips

Menus for field trip lunches may be incorporated into the menu analysis of the day they are served along with the regularly scheduled menu items. The field trip meals will be averaged into the overall week's menu analysis just as if they were meals served on a school campus.

Choices

While multiple choices may be offered for various menu items, the number of choices does not affect the number of menu items that the menu planner establishes as comprising a reimbursable lunch or breakfast.

The meal planner must assure that daily lunch or breakfast menus meet the requirement of having the correct number of menu items. The weekly menu must meet the requirements of the Nutrient Standards.

Students cannot select two of the same menu items under Offer Versus Serve (i.e., two entrees or two servings of the same vegetable) and have it count toward a reimbursable meal. Each menu item must be different.

Nutrition Goals

Menu planning is designed to meet or exceed the minimum nutrient levels for the various age groups. There are no minimum quantities established by the regulations for any menu item. The menu planner establishes what the entrees are and the serving sizes of the menu items.

Point-of-Service Identification

For the purpose of identifying a reimbursable meal at the point-of-service, the menu planner will need to provide students and cashiers with details about the various combinations of menu items (including the various entrees) that may constitute a reimbursable meal.

Substitutions

Occasionally it is necessary to make a substitution to a planned menu cycle for various reasons such as effective use of leftovers, food shortage or improper delivery from vendors. The use of substitutions may:

- change the nutrient content of the meal, and
- meals may no longer meet the Nutrient Standard

When food substitutions are made due to an emergency situation (i.e., food shortage), it is impractical for menu planners to revise menus and recalculate nutrient amounts. If the need for service of a substitute item or leftovers occurs two weeks before the week the original menu item is to be served, the week's menus will be reanalyzed and the Nutrient Standards (for the week) must be met with the substituted item. The two-week time span is the two-week period before the day of the menu item substitution.

If the need for a substitution is known two weeks or more before the menu date:	*If the need occurs within two weeks of the date of meal service:*
• Reanalyze and • Meet the Nutrient Standard.	• No reanalysis is required and • Try to use a similar food as the substitute.

If a food is substituted that is not a similar food according to the definition in this section, a reanalysis may be done but it is not required. For the purposes of NuMenus, a similar food will mean that at the site level, the substitution:

- Plays the same role in the meal (Entree, Milk, Side Dish) and
- Is from the same food group.

Menu planners are encouraged to monitor the substitutions and reanalyze if in their judgement the Nutrient Standards would no longer be met.

REQUIREMENTS FOR REIMBURSABLE MEALS UNDER OFFER VERSUS SERVE

Offer versus serve is a serving method designed to reduce food waste and food costs in school meal programs without jeopardizing the nutritional integrity of the meals served.

National School Lunch Program

- Minimum of three menu items offered: one must be milk
- Required in grades 9-12; optional below that level
- Must select at least two items—one of the items must be an entree

School Breakfast Program

- Minimum of three menu items must be offered: one must be milk
- Must select at least two items
- Student may decline a maximum of one item
- Offer Versus Serve is determined by school district

The breakfast/lunch must be priced as a unit regardless of the number of menu items selected by the student. Under Offer Versus Serve a student may decline food items that he/she does not intend to eat. When a full portion of a food item is declined, a smaller portion may be offered. Offering smaller portions is not mandatory and is a local decision. Only full portions of menu items may be credited toward meeting the requirements for reimbursable meals.

MEAT/MEAT ALTERNATE COMPONENT OF THE REIMBURSABLE LUNCH

Requirement

To be counted in meeting this requirement, the following foods must be served in a main dish or in a main dish and one other menu item: two ounces (edible portion as served) of lean meat, poultry or fish; or two ounces of cheese; or one egg; or 1/2 cup of cooked dry beans or dry peas; or four tablespoons of peanut butter or other nut and seed butters; one ounce of peanuts, soynuts and tree nuts, such as walnuts and nutritionally comparable seeds (not to exceed 50% of the total required amount of meat/meat alternate); or an equivalent of any combination of the above listed foods.

Crediting Meat/Meat Alternate Items

It is sometimes difficult to determine the contribution various meat products make toward meeting the meat/meat alternate requirement of the school lunch or breakfast by reading the label. The following important questions should be resolved regarding these meat products served in school lunches or breakfasts.

1. What percent of fat is in the meat?
2. If cooked dry beans are used, what is the volume measure? Note: the serving size of beans is measured by volume, not weight.
3. If VPP is used to contribute toward the meat/meat alternate requirement, is it used in compliance with regulations? See *Appendix 1E*, page 3.
4. Finally, what contribution does the total product make toward meeting the meat/meat alternate requirement?

Minimum Amounts to Be Credited

Small amounts (less than 1/4 oz.) of meat/meat alternate used as garnishes, seasoning or in breading do not count toward meeting the meat/meat alternate requirement of the meal. Examples are grated Parmesan cheese used as a garnish over spaghetti or egg used in breading.

Using Combinations

Using combinations to meet the meat/meat alternate requirement is allowed under program regulations. However, when doing so, remember that it is more difficult for the cashier to determine if a complete meal has been selected using Offer Versus Serve. For those schools that prefer to use a combination of meat/meat alternates in the main dish and one other menu item, the lists show examples. If combinations are used, they should be merchandised together as a single item. For example, a soup and sandwich combo may be offered, encouraging students to select both items.

The minimum required serving size for children in grades 4-12 is 2 oz. of meat/meat alternate

Some examples of combinations that meet the 2 oz. requirement:

- 1 oz. cooked lean meat + 1 oz. cheese
- 1 oz. cooked lean meat + 1/4 cup cooked dry beans
- 1-1/2 oz. cooked poultry + 1 Tbsp. peanut butter
- 1/4 cup cooked dry peas + 1 oz. cheese
- 1 oz. cooked fish + 1/2 large egg
- 1/4 cup cottage cheese + 1/2 large egg
- 1-1/2 oz. cooked lean meat + 1 oz. cheese
- 2 Tbsp. peanut butter + 1 oz. cheese

The minimum required serving size of meat/meat alternate is 1-1/2 oz. for children in grades K-3

Some examples of combinations that meet the 1-1/2 oz. requirement:

- 1 oz. cooked lean meat + 1/2 oz. cheese,
- 1 oz. cooked lean meat + 1/8 cup cooked dry beans,
- 1 oz. cooked fish + 1/4 large egg
- 1/4 cup cottage cheese + 1/4 large egg

The meat/meat alternate must be served in the main dish or in the main dish with one other menu item. This means that two menu items are the maximum number that may be used to meet the meat/meat alternate requirement.

Example: 1 oz. of cheese in a grilled cheese sandwich and 1 oz. of chicken in a vegetable soup.

Cooked Dry Beans or Peas

Cooked dry beans or peas may be used as a meat alternate or as a vegetable but cannot meet the requirement for both components in the same meal. Examples: 1) Beans in the chili served as the main dish may be credited as the meat alternate or as the vegetable component but not as both in the same meal. 2) Beans in the burrito may not be credited as the meat alternate if beans are served as a vegetable in the same meal.

Nuts & Seeds

Peanuts, soy nuts, tree nuts or seeds can only count as one-half of the meat/meat alternate requirement. They must be combined in the meal with another meat/meat alternate (lean meat, poultry, fish, cheese, large egg, cooked dry beans or peas, peanut butter or other nut or seed butters) to fulfill the requirement. Example: 1 ounce of chopped nuts served in a chicken dish with 1 ounce chicken or 1 ounce of peanuts served with a sandwich containing 1 ounce of cheese fulfills the meat/meat alternate requirement

Important Note

Acorns, chestnuts and coconuts cannot be counted as a meat alternate in child nutrition programs.

Crediting Lowfat and Reduced-Fat Cheeses

The Food and Drug Administration (FDA) has announced regulations/requirements for foods named by use of a nutrient content claim and standardized term for these products. The regulations allow manufacturers to reduce the fat content of their products and call them "low fat," "light" or "reduced," as appropriate, as long as the food is still nutritionally equivalent and otherwise complies with the standardized version. In light of the FDA regulations, the Nutrition and Technical Services Division is removing its restriction and allowing lowfat and reduced-fat cheeses that fall under the FDA's Food Standards: Requirements for Foods Named by Use of a Nutrient Content Claim and a Standardized Term to be credited toward meeting meal pattern requirements in the child nutrition programs on an ounce-per-ounce basis, the same as regular fat cheeses. These products can be served by themselves or in combination with regular fat cheeses. For companies to make lowfat or reduced-fat claims, this criteria must be followed: Lowfat cheese must contain 3 grams or less total fat per 50 grams of product, and reduced-fat cheese must contain at least 25 percent less fat per 50 grams than the regular product.

Commercially Prepared Ready-to-Eat Foods

Meat- and Poultry-Topped Pizza

The Food Safety Inspection Service (FSIS) final rule exempting meat- or poultry-topped pizzas from federal meat inspection requirements was published on August 3, 1992, and effective upon publication.

The Principal Provisions of the Rule include:

- Meat or poultry products must have been previously inspected and passed in a cooked or cured ready-to-eat form.
- Pizzas must be served in public or private nonprofit institutions.
- Pizzas must be ready-to-eat with no further cooking or preparation needed.
- Pizzas must be transported directly to the receiving institution by employees of the preparing firm, receiving institution or food service management company employed by the receiving institution.
- Firms claiming the exemption must comply with specific provisions of the Food and Drug Administration's 1976 *Food Service Sanitation Manual*, which have been incorporated by reference into the rule. In addition, the rule establishes specific requirements for the manual or machine cleaning of utensils and equipment.
- FSIS may withdraw or modify the exemption for any firm if necessary to ensure food safety and public health. The rule establishes due process procedures for taking such actions.
- Firms claiming the exemption are now free to sell fresh meat- or poultry- topped pizzas to school food authorities participating in the National School Lunch Program.
- Under the exemption, state and local health inspection programs have primary responsibility for sanitation. FSIS also reserves the right to conduct any inspections it deems appropriate.

Alternate Foods

Two alternate foods are authorized to meet part of the meat/meat alternate requirement: enriched macaroni with fortified protein and vegetable protein products (VPP).

Enriched Macaroni With Fortified Protein

Enriched macaroni with fortified protein is a macaroni product to which protein has been added. It is not the same as regular enriched macaroni. Enriched macaroni with fortified protein must be combined with meat, poultry, fish or cheese. Dry enriched macaroni with fortified protein may be used to meet no more than 50 percent of the meat/meat alternate requirement. Only products that appear on the USDA listing of acceptable enriched macaroni with fortified protein and have basically the following statement on the label may be used: "One ounce dry weight of this product meets one-half of the meat or meat alternate requirements of lunch or supper of the USDA Child Nutrition Programs when served in combination with one or more ounces of cooked meat, poultry, fish or cheese."

Vegetable Protein Products (VPP)

Developments in food technology have created new types of Vegetable Protein Products that schools can now use. These products include isolates and concentrates. Recognition of these technological advances allows for greater flexibility in food formulation by offering school food service operators the option of using improved vegetable protein ingredients, which result in menu flexibility and increased value for their food purchase dollars.

What is VPP?

VPP is a food that may be used to resemble and substitute for meat, poultry or seafood. VPP may contain flours, concentrates or isolates, or any combination of these as ingredients along with added nutrients, colors, flavors, etc.

How is VPP used as an alternate food in the school lunch program?

- Vegetable protein products must be prepared in combination with meat, poultry or seafood.
- A fully-hydrated vegetable protein product may not exceed 30 parts to 70 parts uncooked meat, poultry or seafood. Products containing 30.1 percent to 100 percent VPP shall not be credited.
- Vegetable protein products may be used in the dry, partially hydrated or fully hydrated form in combination with meat, poultry or seafood.
- Vegetable protein products must resemble and substitute for meat, poultry or seafood. Substitute refers to a VPP whose presence in another food results in a smaller amount of meat, poultry or seafood. It does not refer to a VPP used to substitute for a starch. The VPP may resemble the meat, poultry or seafood at any point of preparation. If the VPP in the finished food looks like, tastes like, etc., the meat, poultry or seafood with which it is combined, the resemblance criterion is met.

What food products provide the best opportunities for using VPP as an alternate food?

Examples of products in which a VPP can be used as an alternate food include, but are not limited to, beef patties, chicken patties, pizza toppings, chili, meat loaf, tuna salad and taco fillings.

When can VPP not be used as an alternate food for credit?

Vegetable protein products cannot be used as an alternate food when substituting for a starch in foods, such as pizza crust or as a breading on a meat, poultry or seafood product. Also, VPP cannot be used as an alternate food when used as functional ingredients, such as binders in meat products, and thickening agents in sauces. However, this does not prevent the use of VPP in the products, such as pizza crust, in the child nutrition programs.

Cheese Substitutes

USDA passed a rule that eliminates the specifications governing the use of cheese alternate products in the NSLP and allows any cheese substitute to be used.

Standards for Meat and Poultry Products

USDA standards for meat and poultry products set legal requirements for content, preparation and labeling before being manufactured and sold in commerce. Standards of identity set specific (and optional) ingredients a food must contain—such as the kind and amount of meat, percent of fat or moisture, and additives, if any—when a product is to be labeled or identified by a common product name.

VEGETABLE/FRUIT COMPONENT OF THE REIMBURSABLE LUNCH

Two or more servings of different vegetables or fruits or both must be served in order to meet the vegetable/fruit requirement. Menu items, such as fruit cocktail and mixed vegetables, are considered as only one serving. However, large combination vegetable/fruit salads, which contain the minimum daily quantity by grade groups of vegetables/fruits in combination with a meat/meat alternate intended to fulfill the role of an entree, such as a chef's salad or a fruit plate with cottage cheese, are considered as two or more servings of vegetable/fruit and will meet the full requirement.

Examples of combinations that meet the 3/4 cup vegetable/fruit per day requirement

- 3/8 cup vegetable + 3/8 cup fruit
- 1/4 cup vegetable + 1/4 cup vegetable +1/4 cup fruit
- 3/8 cup vegetable + 1/4 cup vegetable + 1/8 cup fruit
- 3/8 cup juice (full strength) + 3/8 cup vegetable
- 1/4 cup juice (full strength) + 1/2 cup vegetable

Examples of combinations that meet the 1 cup vegetable/fruit requirement

- 3/8 cup vegetable + 3/8 cup fruit +1/4 cup vegetable
- 1/2 cup vegetable + 1/2 cup vegetable
- 1/2 cup vegetable + 1/2 cup fruit
- 1/2 cup fruit + 1/2 cup fruit
- 1/2 cup juice (full strength) + 1/2 cup vegetable
- 1/4 cup vegetable + 1/4 cup vegetable + 1/2 cup fruit

When making the decision on portion sizes of vegetables/fruits to be served, plate waste must be a factor. Decreasing the quantity of less popular vegetables/fruits and increasing the quantity of popular vegetables/fruits served would lead to increased consumption of vegetables/fruits, which is a primary goal in meeting the Dietary Guidelines. Special promotions and classroom education has been shown to increase the acceptability of unfamiliar and/or less popular vegetables/fruits.

Important Point

Full-strength vegetable/fruit juice may be used to meet the one-half of the vegetable/fruit requirement. Any product, either liquid or frozen, labeled "juice," "full-strength juice," "single-strength juice" or "reconstituted juice" is considered full-strength juice.

Minimum Amounts to be Credited

Small amounts (less than 1/8 cup) of vegetables/fruits used for flavoring or as an optional ingredient, such as a garnish, should not be counted toward the vegetable/fruit requirement.

Specific Requirements Regarding Dry Peas and Beans

Cooked dry beans or peas may be used as a meat alternate or as a vegetable but not as both in the same meal.

Foods The May Not Be Credited as Vegetable/Fruit

Rice, pasta, hominy and potato chips may not be counted as a vegetable to meet the vegetable/fruit requirement.

Juice and Juice Drinks

The following juice products may be used toward meeting the vegetable/fruit component when these conditions are met:

1. Full-Strength Fruit of Vegetable Juice is an undiluted product obtained by extraction from sound fruit. It may be fresh, canned, frozen or reconstituted from a concentrate and may be served in either liquid or frozen state or as an ingredient in a recipe. Examples of full-strength fruit and vegetable juice are apple (including cider), grape, grapefruit, grapefruit-orange, lemon, lime or orange, pear-apple, prune, tomato, tangerine and vegetable. The name of the full-strength fruit or vegetable juice as it appears on the label must include the word(s) "juice" or "full-strength juice" or "single-strength juice" or "100 percent juice" or "reconstituted juice" or "juice from concentrate."

2. A Juice Drink is a product resembling juice that contains full-strength juice along with added water and possibly other ingredients, such as sweeteners, spices or flavorings. A juice drink may be canned, frozen or reconstituted as from a frozen concentrate or a "juice base." It may be served in either liquid or frozen state or as an ingredient in a recipe. Examples of juice drinks are apple juice drink, grape juice drink, orange juice drink and pineapple-grapefruit juice drink. A juice drink may be used toward meeting the vegetable/fruit component of the child nutrition program under these conditions:
   - It must contain a minimum of 50 percent full-strength juice. (Note: Nectars and some common juice drinks, such as lemonade and cranberry juice cocktail, do not contain sufficient quantities of full-strength juice to meet this criterion. Nectars do not commonly contain 50 percent juice and lemonade and cranberry juice cocktail require dilution beyond the 50 percent limit for palatability.)
   - Only the full-strength juice portion of the juice drink may be counted toward meeting the vegetable/fruit component for the reimbursable breakfast and lunch.
   - The name of the product as it appears on the label must contain words such as "juice drink" or "diluted juice beverage" and may indicate the percent full-strength juice in the product.
   - The label ingredient statement must list "juice," "full-strength juice," "single strength juice," "reconstituted juice," "juice from concentrate" or "juice concentrate."

3. A Juice Concentrate may be used toward meeting the vegetable/fruit component of the child nutrition programs. When a juice concentrate or a juice drink concentrate is used in its reconstituted form, it is considered a full-strength juice or a juice drink, as appropriate, and is credited accordingly. When a juice concentrate is used in its concentrated form, it may be credited on a reconstituted basis; that is, credited as if it were reconstituted. For example, a gelatin product containing 1 tablespoon of orange juice concentrate per serving could receive 1/4 cup fruit/vegetable credit since the orange juice concentrate theoretically could be reconstituted in a ratio of one part concentrate to three parts water (1 Tbsp. concentrate + 3 Tbsp. water = 4 Tbsp. or 1/4 cup credit.)

Good menu planning principles should be used in planning menus that use juices or juice drinks. For example, full-strength juice rather than a juice drink may be more desirable in order to keep the level of liquids in the meal at a reasonable level.

APPENDIX 1E, *page 6*: VITAMIN A, C AND IRON RICH FOODS

Foods for Vitamin A

1/4 cup serving (about 1500 or more International Units of vitamin A)
Beet greens
Carrots
Cherries
red sour*
Chili peppers, red
Collards
Kale
Mangoes
Mixed Vegetables
Mustard greens
Peas and carrots (canned or frozen)
Peppers, sweet red
Pumpkin,
Spinach, winter
(acorn, butternut, hubbard)
Sweet potatoes
Turnip greens

1/4 cup serving (about 750-1500 International Units of vitamin A)
Apricots
Broccoli
Cantaloupe
Papayas
Purple plums (canned)

1/2 cup serving (about 750-1500 International Units of vitamin A)
Asparagus, green
Chili peppers, green
Endive, curly
Nectarines
Peaches (except canned),
Prunes
Tomatoes
Tomato juice or reconstituted paste or puree

Foods for Vitamin C

1/4 cup serving (about 15-25 milligrams of vitamin C)
Broccoli
Brussels sprouts
Chili peppers, red and green
Orange juice
Oranges
Peppers, sweet red and green
Cantaloupe
Cauliflower
Collards
Grapefruit
Grapefruit juice
Grapefruit-orange juice
Kiwi fruit*
Mangoes
Mustard greens
Papayas*
Pineapple juice (canned-vitamin C restored)
Strawberries
Tangerine juice
Tangerines

1/4 cup serving (about 8-15 milligrams of vitamin C)
Asparagus
Cabbage
Honeydew melon
Okra
Potatoes (baked, boiled or steamed)
Potatoes (reconstituted instant mashed- vitamin C restored)
Raspberries, red
Sauerkraut
Spinach
Sweet potatoes (except those canned in syrup)
Tomatoes
Tomato juice or reconstituted paste or puree
Turnip greens
Vegetable juice*

Foods for Iron

Meat/Meat Alternate
Dry beans and peas
Eggs
Meats in general, especially liver and other organ meats
Peanuts and other nuts and seeds and their butters*
Shellfish, Turkey

Vegetable/Fruit
Apricots (canned)
Asparagus (canned)
Beans-green, wax, lima (canned)
Bean sprouts
Beets (canned)
Broccoli
Brussels sprouts
Cherries (canned)
Dried fruits-apple, apricots, dates, figs, peaches, prunes, raisins
Grapes (canned)
Parsnips
Peas, green
Potatoes (canned)
Sauerkraut (canned)
Squash (winter)
Sweet potatoes
Tomatoes (canned)
Tomato juice
paste puree, sauce,
Vegetables: Dark green leafy-beet greens, chard, collards, kale, mustard greens, spinach, turnip greens
Vegetable juice (canned)

Grains/Breads
All enriched or whole-grains/ breads

*Addition from *School Breakfast Program Guidance*, USDA/FCS/NTSD, April 1989

Grains/Breads Component of the Reimbursable Lunch

A serving may be:

- 1 slice of whole-grain or enriched flour bread.
- A whole-grain or enriched meal or flour biscuit, bagel, roll, tortilla, muffin, cracker, etc.
- A serving of cooked whole-grain or enriched cereal grains, such as rice, bulgur, oatmeal, corn grits or couscous.
- A serving of whole-grain, enriched or fortified ready-to-eat breakfast cereal.
- A serving of whole-grain, enriched or fortified cereals or bread products that are used as an ingredient in another menu item (such as crispy rice treats, oatmeal cookies or breading on meats, fish or poultry).
- A serving of cooked enriched or whole-grain macaroni or noodle products. Enriched macaroni-type products with fortified protein (as specified in *Appendix 1E, page 3*) may be counted as meeting either the grains/breads requirement or the meat or meat alternate requirement of lunches but not both in the same meal.
- A serving of sweet dessert products such as cookies, cakes, doughnuts, toaster pastries, coffee cake, formulated grain-fruit products or sweet rolls when made with whole-grain and/or enriched meal or flour. Up to 1 grains/breads serving per day may be dessert.
- A serving of pie crust when made from enriched or whole-grain meal or flour from dessert, meat, meat alternate or other pies.
- A serving of snack products such as hard pretzels, hard bread sticks and chips made from whole-grain and/or enriched meal flour.

Important Point

At least one full-sized serving of grains/breads must be offered with lunch each day. Grains/breads servings offered at breakfast cannot be counted as contributing to the grains/breads requirements for lunch.

Criteria for Determining Acceptable Grains/Breads

The following criteria were used as a basis for crediting items to meet the grains/breads requirement:

1. The item must be whole-grain or enriched or made from whole-grain or enriched meal or flour; or if it is a cereal, the product must be whole-grain, enriched or fortified. Bran and germ are credited the same as enriched or whole-grain meal or flour.
2. The label must indicate that the product is enriched or whole-grain; made from enriched or whole-grain meal or flour as well as bran and/or germ; or fortified. If it is enriched, the item must meet the U.S. Food and Drug Administrationís Standards of Identity for enriched bread, macaroni and noodle products, rice, cornmeal or corn grits.
3. The item must be provided in quantities specified in the regulations and in minimum serving sizes.
4. For any grain/bread product not listed on *Appendix 1E, page 8*, use the *Criteria For Determining Equivalent Minimum Weight of a Serving* on *Appendix 1E, page 9*.

APPENDIX 1E, *page 8*: GRAINS/BREADS FOR CHILD NUTRITION PROGRAMS

Group A

1 serving = 20 grams or 0.7 oz.
3/4 serving = 15 grams or 0.5 oz.
1/2 serving = 10 grams or 0.4 oz.
1/4 serving = 5 grams or 0.2 oz.

Breading Type Coating
Bread Sticks-hard,
Chow Mein Noodles
Crackers-saltines and snack crackers
Croutons
Pretzels-hard
Stuffing-dry; *Note: weight applies to bread in stuffing*

Group B

1 serving = 25 grams or 0.9 oz.
3/4 serving = 19 grams or 0.7 oz.
1/2 serving = 13 grams or 0.5 oz.
1/4 serving = 6 grams or 0.2 oz.

Bagels
Batter Type Coating
Biscuits
Breads-white, wheat, whole wheat, French, Italian
Buns-hamburger and hot dog
Crackers-graham (all shapes), animal crackers
Egg Roll Skins
English Muffins
Pita Bread-white, wheat, whole wheat
Pizza Crust
Pretzels- soft
Rolls-white, wheat, whole wheat, potato
Tortillas-wheat or corn
Tortilla Chips-wheat or corn
Taco Shells

Group C

1 serving = 31 grams or 1.1 oz.
3/4 serving = 23 grams or 0.8 oz.
1/2 serving = 16 grams or 0.6 oz.
1/4 serving = 8 grams or 0.3 oz.

Cookies*-plain
Cornbread
Corn Muffins
Croissants
Pancakes
Pie Crust-dessert pies,* meat/meat alternate pies and fruit turnovers**
Waffles

Group D

1 serving = 50 grams or 1.8 oz.
3/4 serving = 38 grams or 1.3 oz.
1/2 serving = 25 grams or 0.9 oz.
1/4 serving = 13 grams or 0.5 oz.

Doughnuts**-cake and yeast raised, unfrosted
Granola Bars**-plain
Muffins- all except corn
Sweet Roll**-unfrosted
Toaster Pastry**- unfrosted

Group E

1 serving = 63 grams or 2.2 oz.
3/4 serving = 47 grams or 1.7 oz.
1/2 serving = 31 grams or 1.1 oz.
1/4 serving = 16 grams or 0.6 oz.

Cookies*-with nuts, raisins, chocolate pieces and/or fruit purees
Doughnuts**-cake and yeast raised, frosted or glazed
French Toast
Grain Fruit Bars**
Granola Bars**-with nuts, raisins, chocolate pieces and/or fruit
Sweet Rolls**-frosted
Toaster Pastry**-frosted

Group F

1 serving = 75 grams or 2.7 oz.
3/4 serving = 56 grams or 2 oz.
1/2 serving = 38 grams or 1.3 oz.
1/4 serving = 19 grams or 0.7 oz.

Cake*-plain, unfrosted
Coffee Cake**

Group G

1 serving = 115 grams or 4 oz.
3/4 serving = 86 grams or 3 oz.
1/2 serving = 58 grams or 2 oz.
1/4 serving = 29 grams or 1 oz.

Brownies*-plain
Cake*-all varieties, frosted

Group H

1 serving =1/2 cup cooked or 25 grams dry

Barley
Breakfast Cereals-cooked
Bulgur (cracked wheat)
Macaroni-all shapes
Noodles, egg- all varieties
Pasta-all shapes
Ravioli-noodle only
Rice-enriched white or brown

Group I

1 serving = 3/4 cup or 1 oz., whichever is less

Breakfast Cereal-cold, dry**

* Allowed only for desserts under the Food Based Menu Planning
**Allowed for desserts under the Food Based Menu Planning; allowed for breakfast under Traditional and Food Based Menu Planning Systems. Some of the above foods, or their accompaniments, may contain more sugar, salt and/or fat than others. To meet Dietary Guidelines, serve products low in fat, sugar and salt

CRITERIA FOR DETERMINING EQUIVALENT MINIMUM WEIGHT OF A SERVING

The following criteria must be used in determining the minimum weight of grains/breads items when the product is not found on *Appendix 1E, page 8*. In calculating the reference servings in *Appendix 1E, page 8*, the amounts of key nutrients for each item were averaged from the available data for items of that type. It was determined that the key nutrients in the items were basically furnished by the enriched flour and/or whole-grain ingredient. Food items have been divided into groups according to the product weight, which will yield the enriched flour and/or whole-grain equivalent of a 25 gram (or 0.9 oz.) slice of white bread. Within each group, all items have approximately the same nutrient and grain content per serving. The minimum weight of each group is based on the enriched flour and/or whole-grain content of the product (exclusive of fillings, toppings, etc.).

1. Crediting of foods will be determined by the total amount of enriched flour and/or whole-grain in the recipe divided by the number of servings the recipe yields. Bran and germ are calculated in the same manner as enriched or whole-grain meal and flour.
   A. For the types of food items listed in Groups A-G in *Appendix 1E, page 8* to count as one full serving, an item must contain no less than 14.75 grams (0.52 ounces) of enriched or whole-grain meal and/or flour.
   B. For the types of food items listed in Groups H and I in *Appendix 1E, page 8* to count as one full serving, the weights and volumes listed must be used.
2. One-fourth of a serving is the smallest amount allowable to be credited toward the grains/breads requirement.

Important Point

Enriched macaroni products with fortified protein may be used to meet a part of the meat/meat alternate requirement or to meet the grains/breads requirement but not both in the same meal.

Definitions

Flour is the product derived by finely grinding and bolting (sifting) wheat or other grains. Flour includes all grains (wheat, rye, corn, etc.).

Meal is the product derived by coarsely grinding corn, oats, wheat, etc.

Whole-grain is the edible part of wheat, corn, rice, oats, rye, barley, etc. Parts of the grains such as the germ or the bran are not considered whole-grain.

Cereal Grain is the edible part of a whole grain that has been processed for consumption.

Breakfast Cereal is any cereal grain served in a cold and dry form. Breakfast cereals are traditionally served as a breakfast menu item but may be served in meals other than breakfast.

Enriched means that the product conforms to the Food and Drug Administration's Standard of Identity for levels of iron, thiamin, riboflavin and niacin. The terms "enriched," "fortified," or similar terms indicate the addition of one or more vitamins or minerals or protein to a food, unless an applicable federal regulation requires the use of specific words or statements. "Whole-grain" flour or meal is the product derived by grinding the entire grain minus the husk/hull. If a flour or meal does not contain all edible parts of the grain, it is not whole-grain.

YOUR NOTES

STANDARDIZED RECIPE

- ❑ Beans/Legumes
- ❑ Breakfast
- ❑ Condiment
- ❑ Dessert
- ❑ Entree
- ❑ Grain/Bread
- ❑ Salad/Salad Dressing
- ❑ Sandwich
- ❑ Sauce/Gravy
- ❑ Soup
- ❑ Vegetable/Fruit
- ❑ Other

Recipe Name _____

Number of Servings _____

INGREDIENTS	MEASURE		PREPARATION DIRECTIONS
List In Order Used	Weight	Volume	

Yield: _____
(Gallons or Total Weight)

Portion Size: _____

Recorded By: _____ Date: _____

Suggestions: _____

Additional Information: _____

For more information about completing this form, see the *Travel Guide* Chapter 3 (*Standardized Recipes*).

YOUR NOTES

MANUFACTURED FOOD PRODUCT RECIPE

Product Name _____

Manufacturer _____

- ❑ Beans/Legumes
- ❑ Breakfast
- ❑ Condiment
- ❑ Dessert
- ❑ Entree
- ❑ Grain/Bread
- ❑ Salad/Salad Dressing
- ❑ Sandwich
- ❑ Sauce/Gravy
- ❑ Soup
- ❑ Vegetable/Fruit
- ❑ Other

MANUFACTURER'S NUTRIENT SPECIFICATIONS

Nutrient Submission Form ❑Yes ❑No

Manufacturer's Nutrient Label Attached ❑Yes ❑No

Other ❑ Please Specify:

PREPARATION DIRECTIONS

Equipment Type/Size and Cooking Time/Temperature

Yield: _____
(Gallons or Total Weight)

Portion Size: _____

Recorded By: _____ Date: _____

Serving Suggestions: _____

Additional Information: _____

For more information about completing this form, see the *Travel Guide* Chapter 3, *Standardized Recipes.*

YOUR NOTES

APPENDIX 3C: WEIGHT AND VOLUME

COMMON CONVERSIONS FOR WEIGHT AND VOLUME

CONVERT WEIGHT

Weight	Formula
Pounds (lb) to ounces (oz)	Multiply the number of pounds by 16
Ounces (oz) to pounds (lb)	Divide the number of ounces by 16

CONVERT VOLUME

Volume	Formula
Gallons (gal) to quarts (qt)	Multiply the number of gallons by 4
Quarts (qt) to gallons (gal)	Divide the number of quarts by 4
Quarts (qt) to cups (c)	Multiply the number of quarts by 4
Cups (c) to quarts (qt)	Divide the number of cups by 4
Cups (c) to tablespoons (tbsp)	Multiply the number of cups by 16
Tablespoons (tbsp) to cups (c)	Divide the number of tablespoons by 16
Tablespoons (tbsp) to teaspoons(tsp)	Multiply the number of tablespoons by 3
Teaspoons (tsp) to Tablespoons (tbsp)	Divide the number of teaspoons by 3

YOUR NOTES

MENU PRODUCTION RECORD

Breakfast Lunch *(Circle One)*

NUMBER OF MEALS SERVED	Planned	Actual
Students		
Adults/a la acarte		
Total		

Manager Signature _____

Date _____

School _____

Grade *(Circle One)* K-3 K-6 7-12 Other _____

❑ Food Based ❑ Traditional

❑ NuMenus ❑ Assisted NuMenus

Meal Contribution	Menu Items	Quantity Prepared Recipe number or pounds, #10 cans, each, cases, etc.	Portion Size Ounce, cup, each			Number Servings Planned	Actual Servings Prepared	Food Leftover or Short	Your Comments
			K-3	K-6	7-12				

Meal Contribution	Menu Items	Quantity Prepared Recipe number or pounds, #10 cans, each, cases, etc.	Portion Size Ounce, cup, each			Number Servings Planned	Actual Servings Served	Food Leftover or Short	Your Comments
			K-3	K-6	7-12				

Nutrition Facts

Feathers Chicken Nuggets

Serving Size 8 Nuggets (113g)
Servings Per Container about 80

Amount Per Serving	
Calories 373	Calories from Fat 240
	% Daily Value*
Total Fat 27g	40%
Saturated Fat 7g	31%
Cholesterol 67mg	23%
Sodium 653mg	27%
Total Carbohydrate 19g	7%
Dietary Fiber 3g	7%
Sugars 5g	0
Protein 15g	29%
Vitamin A 3% •	Iron 4%

Not a significant source of Vitamin C and Calcium.

*Percent Daily Values are based on a 2,000 calorie diet.

YOUR NOTES

NUTRIENT DATA SUBMISSION FORM FOR PROCESSED FOOD PRODUCT ANALYSIS

Data submitted for this product is *AS SERVED* ❑ or *AS PURCHASED* ❑ (Check One)

Brand _____
Product Name _____
Product Code _____
CN Label Number _____
Package Size _____ pounds _____ fluid ounces _____ grams
Standard Serving _____ (100 grams or servings)
Number of Servings per Package _____
Weight per Serving _____
Analysis Based On _____

Nutrients	Measurement	Nutrient Value	Unit Weight
Calories	xxx		kcal
Protein	xx.xxx		grams
Total Fat	xx.xxx		grams
Saturated Fat	x.xxx		grams
Carbohydrates	xx.xxx		grams
Total Dietary Fiber	xx.xx		grams
Cholesterol	xx.xxx		milligrams
Calcium	xx.x		milligrams
Iron	xx.xxx		milligrams
Sodium	xx.x		milligrams
Vitamin C	x.xx		milligrams
Vitamin A	x.x		IU
Fat Change*	xxxx	%	N/A
Moisture Change*	xxxx	%	N/A

** If Available*

NOTE A value must be entered for each nutrient.
If the food item does not contain a specific nutrient, enter zero (0).

Preparation Instructions
Include ingredient/quantity to be added, and cooking methods, time and temperature

_____
_____
_____
_____

What source of Nutrient data was used to calculate the nutrient analysis?
❑ Laboratory analysis (analytical)
❑ Handbook # calculations (calculated)
❑ Combination of the above (analytical and calculated)
❑ Nutrition label
❑ Other (Specify)

This processed product information is for school food service use only

YOUR NOTES

APPENDIX 6C, *page 1*: COMMON PERCENTAGE OF MOISTURE AND FAT CHANGE DURING FOOD PREPARATION

Food Item	Moisture Change %	Fat Change %
Beans and Franks	-5	0
Biscuit	-12	0
Bread	-8	0
Brownie	-6	0
Cake	-12	0
Chicken (with or without skin, coating)		
Baked	-18	-8
Fried	-40	+10
Chicken Patty, Nugget (with or without skin, coating)		
Baked	-9	-1
Fried	-3	+1
Reheat	-4	0
Chicken Tetrazzini	-10	0
Cobbler	-9	0
Cookie	-12	0
Cupcake	-19	0
Egg Roll		
Baked	-5	0
Fried	-10	+5
Eggs		
Omelet	-8	0
Scrambled	-8	0
Fish Fillet (with or without skin, coating)		
Baked	-12	0
Fried	-17	+5
Fish Stick, Patty, Nugget (with or without skin, coating)		
Baked	-9	-1
Fried	-3	+1
Reheat	-4	0

APPENDIX 6C, *page 2*: COMMON PERCENTAGE OF MOISTURE AND FAT CHANGE DURING FOOD PREPARATION		
Food Item	**Moisture Change %**	**Fat Change %**
Frankfurter	-5	-1
French Fries		
Baked	-14	-1
Fried	-13	+5
Grilled Cheese Sandwich	-4	0
Hamburger Patty	-14	-11
Lasagna	-7	0
Macaroni and Cheese	-9	0
Manicotti	-12	0
Meat Mixture	-10	0
Meatloaf	-14	-9
Muffin	-11	0
Pancake, reheat	-6	0
Pizza (baked or reheat)	-5	0
100% Soy Patty	-8	0
Soy/Beef Patty	-8	-10
Spaghetti w/Meat Sauce	-6	0
Taco/Burrito	0	0
Tator Tots		
Baked	-13	-1
Fried	-8	+5
Tuna Casserole	-1	0
Turkey, baked		
Burger	-20	-9
Roast/whole	-22	-6
Turnover	-5	0
Vegetable Mixture	-10	0
Waffle, reheat	-3	0

Note: These moisture/fat change values apply to the nutrient analysis of processed food products supplied by industry to the local school. The moisture fat change factors adjust the "as purchased" product nutrient data to "as served" product nutrient data, which is the final product (ready to eat). Moisture/fat change values for food items in the chart represent all cooking methods, unless otherwise specified. In general, assume zero (0) moisture/fat change for food items that are heated/reheated.

APPENDIX 7A, *page 1*:
YOUR PROGRESS REPORT TO REACH HEALTHY SCHOOL MEALS

ACCOMPLISHMENT	Yes	No	Date to Complete	Done
I have talked to my staff about the SMI requirements and Dietary Guidelines				
I have selected a menu planning option				
I have talked to staff about selected menu planning option				
I have talked to my staff about standardizing recipes				
We conduct taste tests with students and staff on menu items				
We have standardized one recipe				
We have standardized five recipes				
We have standardized ten recipes				
I have talked to my staff about low fat preparation				
We have modified one recipe to reduce fat				
We have modified five recipes to reduce fat				
My staff is practicing low fat preparation techniques				
I have talked to my staff about low sodium preparation				
We have modified one recipe to reduce sodium				

...Continue on the following page

YOUR PROGRESS REPORT TO REACH HEALTHY SCHOOL MEALS *...page 2*				
ACCOMPLISHMENT	Yes	No	Date to Complete	Done
I have talked with my principal about the Dietary Guidelines and our efforts to comply with them				
We have modified five recipes to reduce sodium				
We have standardized all our recipes				
I have talked to the teaching staff about incorporating nutrition education in their classroom				
We offer a variety of vegetables and fruits each day				
We offer a choice of breads and grains each day and at least one contains whole grain				
We offer a plant-based entree choice each day				

After completing this Progress Report, use the ASFSA *Keys to Excellence* to find out what to work on next. Copies are available through the Child Nutrition Lending Library.